



**INITIAL ASSESSMENT
OF THE
VAPOR INTRUSION PATHWAY
AT THE
FORMER ACME INDUSTRIES PROPERTY
600 – 620 NORTH MECHANIC STREET
JACKSON, MICHIGAN**

OCTOBER 2, 2013

**Prepared for:
Jackson County Brownfield Redevelopment Authority**

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INTRODUCTION AND PURPOSE

The Brownfield Cleanup Revolving Loan Fund (BCRLF) allocated funds for the purpose of “monitoring populations exposed to hazardous substances and contaminants from a Brownfield Site.” Contamination from the historically industrial use of the Acme/Zoerman Clark property may present unacceptable risks to human receptors. Future redevelopment of the subject property will likely involve some form of cleanup (e.g., placement of engineered barriers, removals, etc.), and the final result of redevelopment will need to protect the public from exposure to contaminants present at the site.

The vapor intrusion pathway was evaluated in order to ascertain whether this pathway presents an unacceptable risk to the public. Information obtained from this investigation will be used to help identify appropriate cleanup actions and engineering controls needed to mitigate risk to the public both during and after the redevelopment.



FIELD ACTIVITIES

Envirologic developed a Sampling and Analysis Plan which was submitted and approved by the U.S. Environmental Protection Agency (Appendix A: Sampling and Analysis Plan). Beginning on July 19, 2013 Envirologic installed 15 shallow soil borings in a grid pattern across the site which is inclusive of known areas of concern and possible future building sites. All boring locations were located using a Trimble GeoXH GPS unit. Figure 1 – Soil Gas Sampling Location (Appendix B) depicts the location of soil gas monitoring points.

Soil borings were installed with a GeoProbe™ 66DT. Borings were advanced to a target depth of at least five feet below the bottom of the concrete slab; however, at several boring locations refusal was met prior to the target depth. Soils were characterized by an Envirologic geologist and field-screened with a photoionization detector (PID). The concrete slab varied in thickness from three to 19 inches. Beneath the concrete slab, groundwater was not encountered in any of the borings at the time of drilling. Generally, two to three feet of sandy fill materials were encountered. Underlying the fill materials was clay or highly weathered sandstone. PID readings of 1.0, 3.9, and 0.3 parts per million (ppm) were observed at boring locations SG-1, SG-13, and SG-14 respectively.

Soil gas monitoring points were installed at locations SG-1 through SG-15 (Figure 1). Monitoring points were installed in accordance with the Standard Operating Procedure (SOP) presented in Appendix F.2 of the *MDEQ Guidance Document for the Vapor Intrusion Pathway*. The monitoring points were completed with six-inch-long by 0.5-inch-diameter stainless steel screen with 0.25-inch polyethylene riser tubing. Clean sand was placed around the screen and the remainder of the borehole was sealed with hydrated bentonite.

Soil gas samples were collected from the monitoring points the day following installation. The SOP presented in Appendix F.2 of the *MDEQ Guidance Document for Vapor Intrusion* was followed for soil gas sampling activities. Helium was used as a tracer gas during purging activities to ensure that there was no leakage through the point seal or the aboveground fittings. Purging the vapor point, tubing, and flow regulator assembly was completed by removing approximately 240 to 300 mL of air/soil gas using a 50-mL syringe. Soil gas samples and a duplicate sample (collected in parallel from location SG-4) were collected in laboratory-prepared 750-mL amber Bottle Vacs equipped with a 100 mL/min critical orifice. The samples were submitted to Fibertec Environmental Services of Holt, Michigan for laboratory analysis of volatile organic compounds using EPA Method TO-15.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for soil gas samples are summarized in Table 1 and 2, along with comparisons to the appropriate Nonresidential Vapor Intrusion Screening Values (SV_{VI}), which were obtained from the MDEQ *Guidance Document for the Vapor Intrusion Pathway, Appendix D.2* updated May, 2013. Nonresidential VI Screening Values were selected based on future site use and redevelopment goals. Several target compounds were identified by the TO-15 scan at concentrations above laboratory reporting limits; however, laboratory analytical results only identified one sample in which target compounds exceeded their respective non-residential screening levels. Both the nature and structure of compounds identified in soil gas samples will affect future cleanup measures during redevelopment. Both petroleum hydrocarbons (PHCs) and chlorinated hydrocarbons (CHCs) were identified in every soil gas sample submitted for analysis.

Vapor monitoring points SG-4, SG-5, SG-6, SG-7, SG-8, SG-9, SG-10, SG-11, SG-12, and SG-13 were installed less than five feet beneath the bottom of the concrete slab due to refusal, and results were compared to the Nonresidential Land Use Vapor Intrusion Shallow Soil Gas (sub-slab) Screening Levels ($SG_{VI-ss-nr}$). Vapor monitoring points installed at SG-1, SG-2, SG-3, and SG-14 have screens that straddle five feet beneath the base of the concrete slab; results from these soil gas samples were compared to the more stringent, $SG_{VI-ss-nr}$. Analytical results from these samples and the $SG_{VI-ss-nr}$ comparison are organized in Table 1 – Shallow Soil Gas Analytical Results (refer to Appendix C).

Laboratory analytical results from SG-14 identified carbon tetrachloride, chloroform, and trichloroethane at concentrations exceeding their respective Nonresidential Land Use Vapor Intrusion Screening Values (SG_{VI-nr}). Analytical results from soil gas samples SG-3, SG-11 and SG-13 identified target compounds at concentrations greater than 10% of their respective screening values, but less than the screening values. Target compounds identified with concentrations exceeding or greater than 10% of their respective screening levels are displayed on Figure 2.

Monitoring point SG-15 was installed greater than five feet beneath the bottom of the concrete slab; therefore, results were compared to the Nonresidential Land Use Vapor Intrusion Deep Soil Gas Screening levels (SG_{VI-nr}). No compounds identified in SG-15 exceeded the SG_{VI-nr} , nor were any compounds identified at concentrations greater than 10% of their respective screening levels. Analytical results from SG-15 and the SG_{VI-nr} comparison are organized in Table 2 – Deep Soil Gas Analytical Results (refer to Appendix C).

RECOMMENDATIONS FOR FUTURE REDEVELOPMENT

The MDEQ *Guidance Document for the Vapor Intrusion Pathway* suggests that soil gas concentrations less than 10% of their respective SG_{VI} concentrations represent little or no VI risk, and that no additional samples are necessary to show that the pathway is not a risk to human health. However, for soil gas samples that have target compounds identified at concentrations greater than 10% of their respective SG_{VI}, but still less than the screening level, the MDEQ recommends multiple sampling events to demonstrate that vapor intrusion does not present risk to human health. If future redevelopment includes a structure placed in proximity to SG-3, SG-11, or SG-13, three to four sampling events are recommended in order to demonstrate that these points do not present a VI risk to building users.

Target compounds identified above their respective SG_{VI-SS} were only observed in the soil gas sample collected from SG-14; thus, this location is considered the most significant source of vapors. Conceptual plans for possible development have shown the possibility of newly constructed structures on the southern portion of the subject property, including in the area above SG-14. If structures are placed within a 100-foot radius of SG-14, engineered building controls will be needed as a presumptive remedy for VI risk. The shaded area shown on Figure 2 shows the extent of a 100-foot radius from SG-14.

Engineered building controls such as subslab depressurization, submembrane depressurization, or a passive barrier system will prevent vapors from entering the structure, thus mitigating VI risk. Engineered building controls would be needed for any newly constructed structures in the southern third of the property.

It should be noted that alterations to current property conditions (e.g., partially or completely removing the concrete slab) may alter the movement, and distribution of subsurface vapor such that other areas on the site may pose a vapor intrusion risk.

APPENDIX A

SAMPLING AND ANALYSIS PLAN





SAMPLING AND ANALYSIS PLAN

FOR

**FORMER ACME INDUSTRIES FACILITY
MECHANIC STREET
JACKSON, MICHIGAN**

August 12, 2013

**Prepared for:
Jackson County Brownfield Redevelopment Authority
Cooperative Agreement BF-00E64701-0**

Prepared by:

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ATTACHMENT

FIGURE 2: *Site Plan with Proposed Soil Gas Sample Locations*



**SAMPLING PLAN
FOR
FORMER ACME INDUSTRIES FACILITY
MECHANIC STREET
JACKSON, MICHIGAN**
***Jackson County Brownfield Redevelopment Authority —
Cooperative Agreement 2B00E87601-1***

This investigation is being supported by the Jackson County Brownfield Redevelopment Authority under U.S. EPA Brownfield Assessment Grant 2B00E87601-1. The eligibility was approved by the USEPA on June 24, 2009. This sampling plan is being submitted for acceptance by the U.S. Environmental Protection Agency.

BACKGROUND

The Acme Building site is one of the earlier manufacturing sites in the city of Jackson. First developed as early as 1886, the site has been occupied by various manufacturers. Products manufactured at the property have included farm implements, wagons, and later, heating and cooling equipment. Operations at the site ceased in the late 1980s and the buildings on site have been vacant since that time. Since its closure in the late 1980s, numerous studies, including Phase I and II Environmental Site Assessments, have been conducted on the property to determine its environmental condition. In 2010 the buildings comprising the Acme facility were demolished.

Historical investigations of the facility have revealed that soil and groundwater contamination consisting of various compounds exist beneath the former buildings. Results of the investigations suggest that concentrations of contaminants in groundwater do not pose an immediate threat to public health within the current and future planned uses of the property and that contaminant concentrations in soil, do not pose an ambient air inhalation hazard. However, plans for the property may now include the construction of commercial buildings to support other nearby developments – notably Armory Arts (apartments and arts-based community center), Art 634 (art studios, retail and art-centered classrooms), Goodwill Industries, the County Fairgrounds and other nearby properties. Because of the potential for building construction on the former Acme property it is necessary for the JCBRA to determine and evaluate the potential for exposure to site contaminants in indoor air (indoor air inhalation) and demonstrate a means by which the buildings constructed on the property can be safely utilized.



PURPOSE OF ASSESSMENT

BCRLF funding was set aside for the purpose of “monitoring populations exposed to hazardous substances and contaminants from a Brownfield Site.” The end use of the Acme/Zoerman Clark property will include a strong component of public access. Any redevelopment will need to protect the public from exposure to contaminants present at this site. It is likely that redevelopment will require some form of cleanup (e.g., placement of engineered barriers, removals, etc.). A better understanding of future land use “informs the cleanup” and allows various parties to help manage and/or monitor the public’s exposure to contaminants during and after the redevelopment.

One exposure pathway that has not been thoroughly evaluated is the potential exposures to indoor air, should future development include placement of commercial structures on the site. In early 2013, MDEQ finalized screening levels to evaluate this exposure pathway, and we can finally evaluate this site against those screening levels. The purpose of the investigation is to obtain enough site information to ascertain whether the contaminants pose an unacceptable risk through this exposure pathway. If contaminant levels are in excess of screening levels, such data helps demonstrate what cleanup actions and engineering controls would be needed to protect the public’s exposure to contamination. Specifically, the investigation will consist of a primary goal of defining whether soil gas beneath the former Acme buildings (and beneath the existing concrete slab) contains contaminants at concentrations in excess of the Vapor Intrusion Soil Gas Screening Levels for indoor air inhalation.

ASSESSMENT DESCRIPTION

It is anticipated that 15 shallow soil borings will be advanced in a grid pattern across the site which will be inclusive of known areas of concern and possible future building sites. The borings will be advanced to a target depth of least five feet below the bottom of the concrete slab. Once the target depth has been reached or when refusal is encountered, soil vapor probes will be placed in each boring. The borings/vapor probe will be completed in accordance with MDEQ *Guidance Document for the Vapor Intrusion Pathway and Standard Operation Procedures (SOP)* specified in the Quality Assurance Project Plan (QAPP). All boring locations will be located using a Trimble GeoXH GPS unit.

One soil gas sample will be collected from each vapor probe. The soil gas samples will be analyzed by Method TO-15 for the various organic compounds common to it. Refer to Table 1 for specific Data Quality Objectives.

Table 1: Data Quality Objectives

▪ DQO #1: Do the concentrations of carbon tetrachloride and other VOCs in soil gas pose an indoor air inhalation risk?	
SG-1,2,3, 4,5,6,7, 8,9,10, 11,12, 13,14, 15	<i>Location Rationale</i>
	The locations provide broad coverage across the area where future development would presumably occur and cover the two areas of concern where the concentrations of carbon tetrachloride exceed the generic infinite source VSIC.
	<i>Sampling Depth/Interval</i>
	The projected depth of each soil boring is a maximum of 5 feet beneath the bottom of the concrete slab or until refusal, whichever is encountered first.
	<i>Depth/Interval Rationale</i>
	Sampling depths of 5' are specific to the Vapor Intrusion Deep Soil Gas Screening Levels. Where refusal is encountered less than 5', the Shallow Soil Gas screening levels will prevail.
<i>Media Sampled</i>	Soil gas
	<i>Parameters</i>
<i>Parameter Rationale</i>	The target chemical compounds are volatile organics. Each soil gas sample will be analyzed by Method TO-15. Oxygen readings may also be collected to assist with defining bioattenuation zones.
	Previous soil and groundwater investigations revealed the presence of various volatile organic compounds. It is these compounds that could create a vapor intrusion pathway. Additionally, concentrations of volatile organics (i.e. carbon tetrachloride, PCE, TCE and others) in soil exceed the Vapor Intrusion Soil Screening Levels and Soil Volatilization to Indoor Air Screening Levels.

FIELD SCREENING

During the advancement of soil borings, soil will be continuously screened for organic vapors using a Photoionization Detector (PID). Observations for visual staining and odors will also be made. Field Screening procedures in the QAPP, including instrument calibration procedures, will be followed. Soils will also be classified in accordance with the accepted procedure in the QAPP.

SAMPLE COLLECTION PROCEDURES

Specific sampling methods detailed in the QAPP will be followed. Methods established in the QAPP for sample collection and preservation will be followed. Sample handling and custody requirements in the QAPP will be followed. All analytical results will be compared to State of Michigan generic residential and non-residential clean-up criteria for soil gas.



QUALITY ASSURANCE

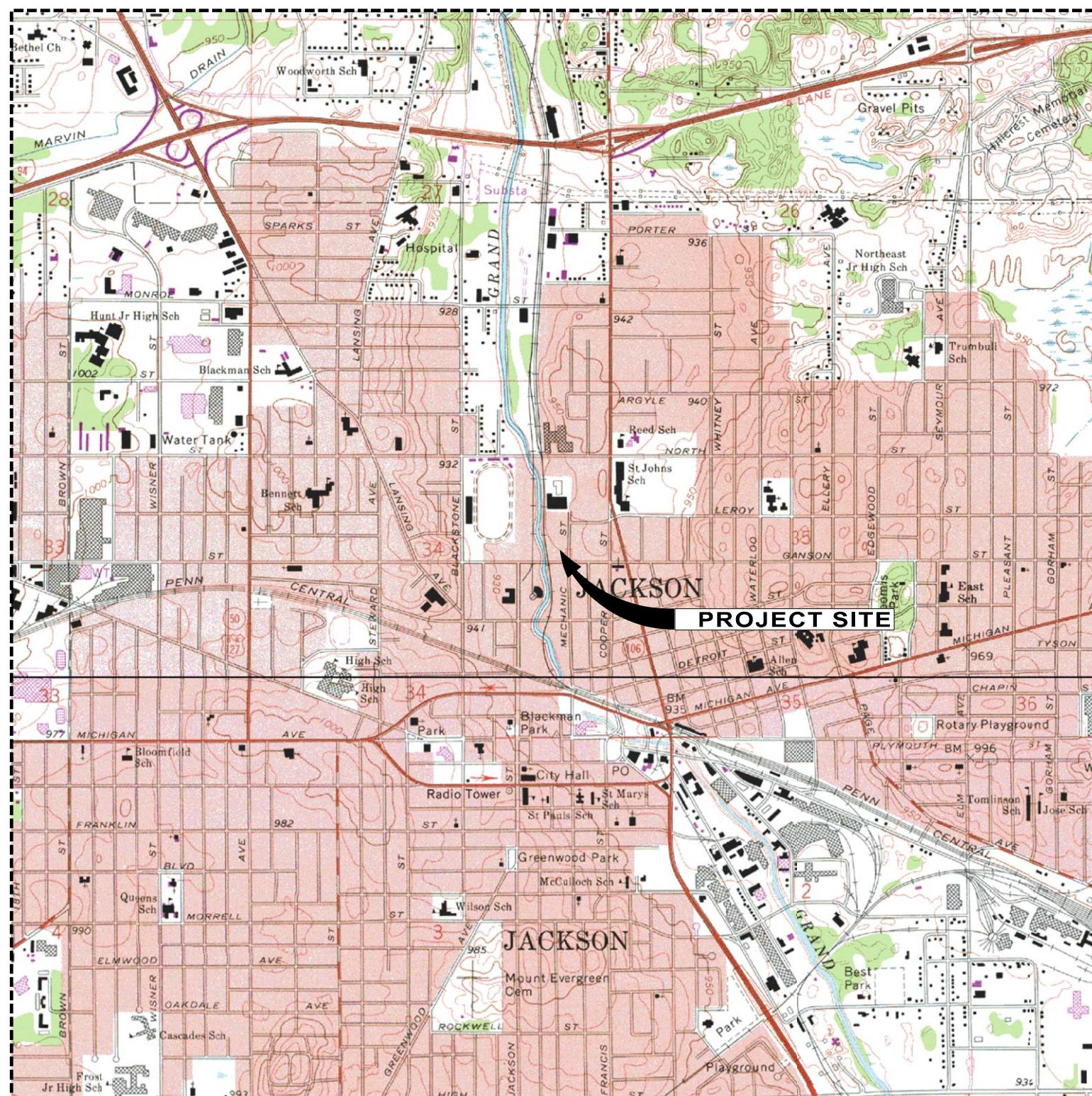
Sampling activities will be completed in accordance with Envirologic's approved QAPP. Envirologic will conduct the appropriate number of QA/QC samples as specified in the QAPP. An estimate of the QA/QC sample collection and analysis requirements for this project are:

Number of Samples	QA\QC Sample Type	Frequency of Sample Collection and Analysis	Sample Analyses
1	Duplicate (Collocated) Sample	1 duplicate per 20 samples, minimum of 1 per sample event	VOCs
1	Matrix Spike / Matrix Spike Duplicate	1 MS/MSD per 20 samples or as specified in the lab SOPs	VOCs

FIGURES

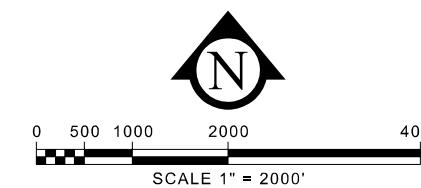
Site Plan Proposed Soil Gas Sample Locations





SOURCE: JACKSON NORTH AND JACKSON SOUTH, MICHIGAN USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE MAPS
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ENTGRO 090178_090178_Site_Plan.dwg, Location Map

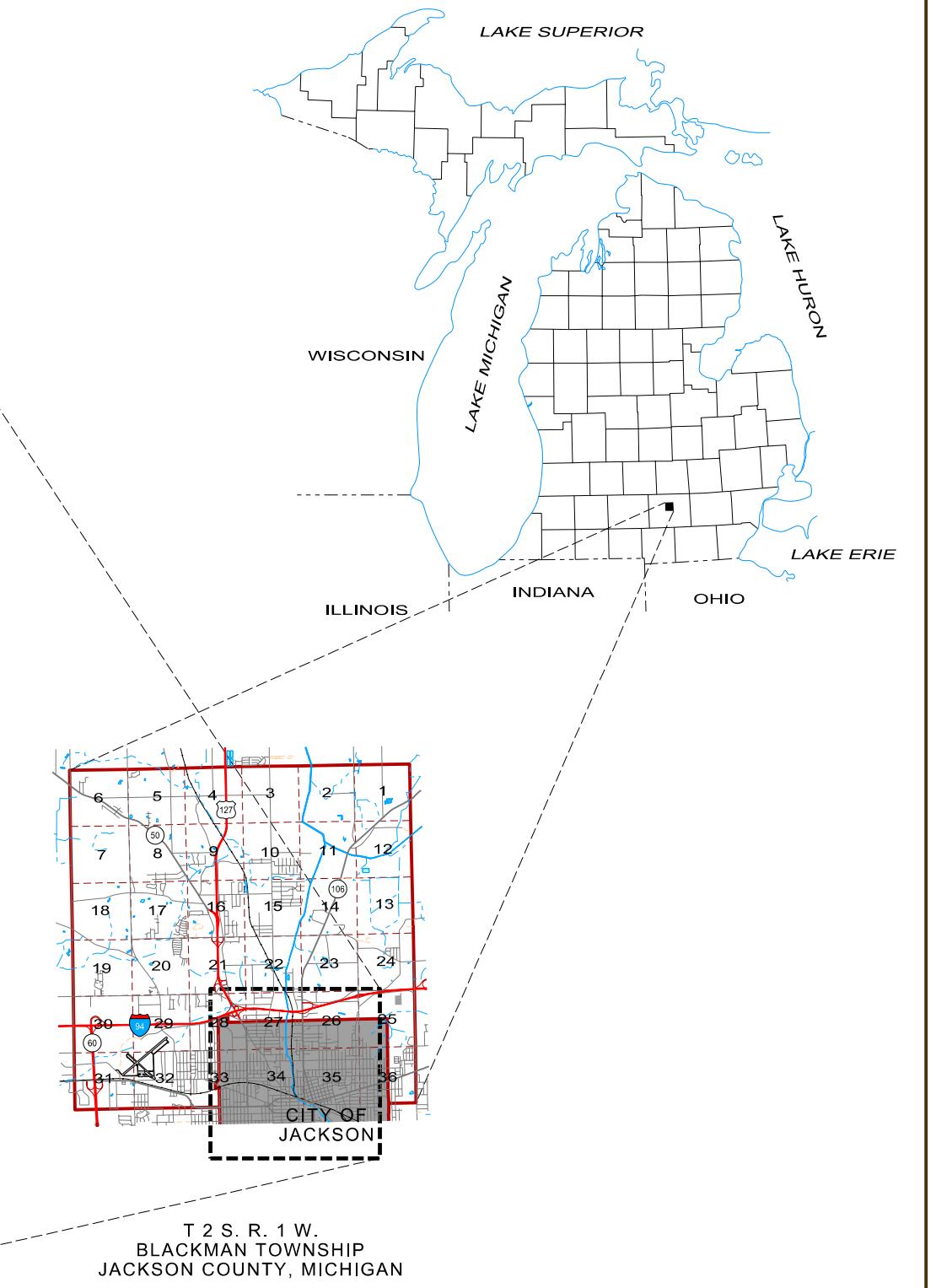


**FORMER ACME
INDUSTRIES PROPERTY**
600 - 620 NORTH MECHANIC STREET
JACKSON, MICHIGAN
LOCATION MAP

PROJECT NO.
090178

FIGURE No.

1



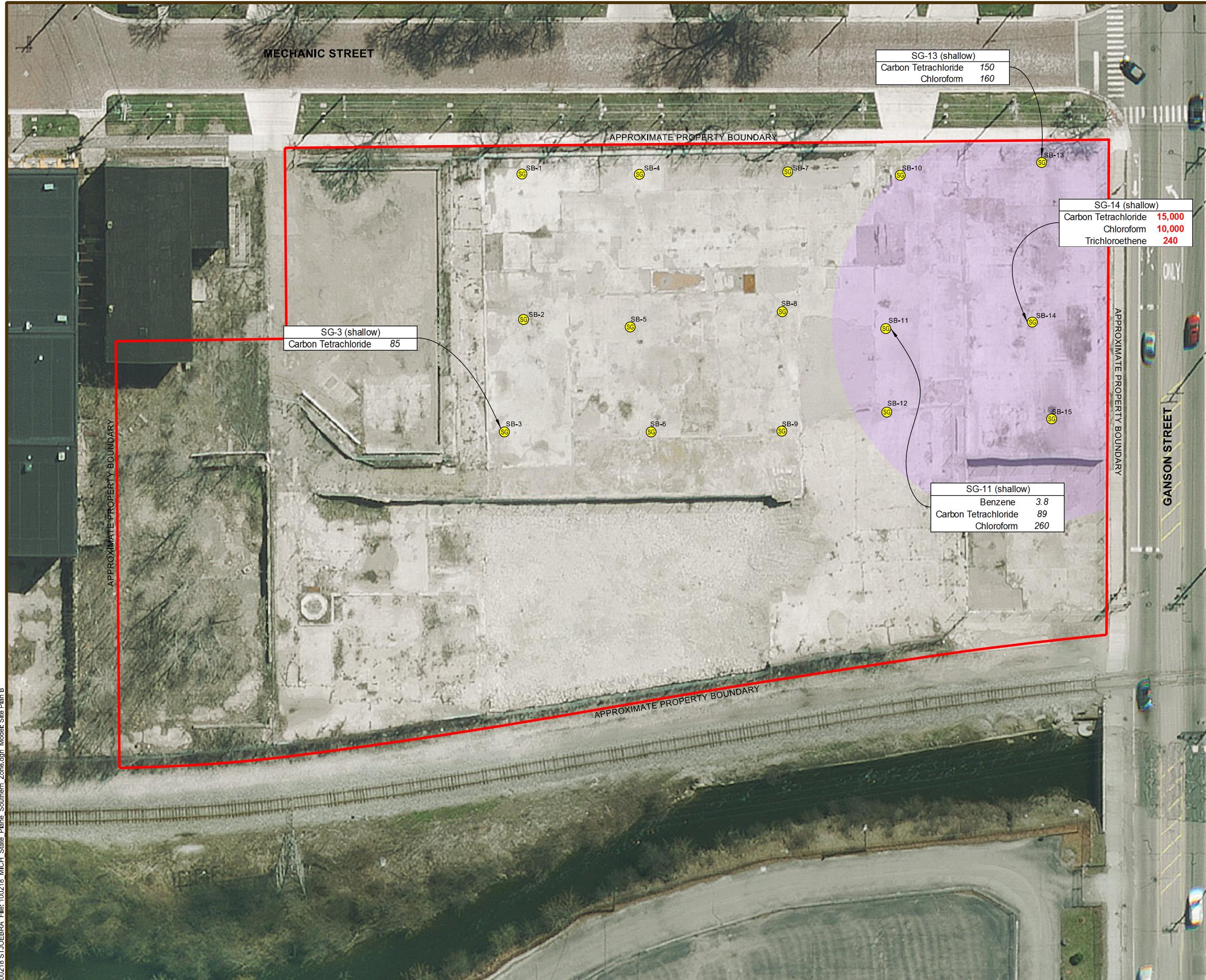


APPENDIX B

SITE FIGURES

Figure 1: Soil Gas Sampling Locations





NOTE: AERIAL PHOTOGRAPHY: 2011 COLOR ORTHOPHOTO, OBTAINED FROM THE JACKSON COUNTY ON LINE GIS VIEWER.

NOTE:
THIS IS NOT A PROPERTY BOUNDARY SURVEY. PROPERTY BOUNDARIES SHOWN ON THIS MAP
ARE BASED ON AVAILABLE FURNISHED INFORMATION AND ARE APPROXIMATE ONLY AND
SHOULD NOT BE USED TO ESTABLISH PROPERTY BOUNDARY LOCATION IN THE FIELD.

FORMER ACME INDUSTRIES PROPERTY

**600 - 620 NORTH MECHANIC STREET
JACKSON, MICHIGAN**

SOIL GAS SAMPLE LOCATION

PROJECT NO.

FIGURE No

1

APPENDIX C

Table 1: Shallow Soil-Gas Analytical Results

Table 2: Deep Soil-Gas Analytical Results



Table 1: Shallow Soil-Gas Analytical Results

Compound (Method TO-15), units: ppbv	Nonresidential Landuse Vapor Intrusion Shallow Soil Gas Screening levels ⁽⁴⁾	SG-1	SG-2	SG-3	SG-4	SG-5	SG-6	SG-7	SG-8	SG-9	SG-10	SG-11	SG-12	SG-13	SG-14
Top of vapor point <i>depth below concrete slab</i>		4.67	4.83	4.92	3.33	1.96	4.50	3.33	2.08	4.50	4.50	4.25	3.25	3.92	4.83
Bottom of vapor point <i>depth below concrete slab</i>		5.17	5.33	5.42	3.83	2.46	5.00	3.83	2.58	5.00	5.00	4.75	3.75	4.42	5.33
Acetone	1,400,000	<13	25	200	78	74	170	130	160	<17	48	180	290	70	190
Benzene	650	0.39	0.41	<1.4	2.1	1.5	<1.8	<1.5	1.9	<0.38	0.51	3.8	1.7	0.57	<1.8
2-Butanone	940,000	<1.1	<1.1	<5.2	<3.0	2.9	<4.9	<2.5	5.2	<1.1	<1.1	11	4.2	1.2	<5.1
Carbon Disulfide	120,000	<2.6	<2.6	<13	130	23	40	19	42	<2.6	<2.6	<26	12	2.9	<13
Carbon Tetrachloride	460	<0.38	<0.38	85	4.8	4.2	14	3.7	40	<0.38	<0.38	89	1.2	150	15000
Chloroform	1,500	<0.33	<0.33	10	3.1	2.9	22	2.5	9.9	<0.33	<0.33	260	3.9	160	10000
Chloromethane	13,000	<2.5	<2.5	<13	<13	5.3	<13	<13	<2.5	<2.5	<2.5	<25	<2.5	<2.5	<13
Cyclohexane	970,000	<2.6	<2.6	<13	<13	3.4	<13	<13	5	<2.6	<2.6	<26	<2.6	<2.6	<13
1,3-Dichlorobenzene	280	1.4	5.1	4.7	3.4	7.2	6.3	2.9	5.9	2.5	<0.38	<2.8	3.5	<0.38	2.4
Dichlorodifluoromethane	5,600,000	<2.5	<2.5	<13	<1.4	<2.5	<13	<13	<2.5	<2.5	<2.5	<25	1.1	<2.5	<13
1,1-Dichloroethene	69,000	<0.37	<0.36	<1.3	<1.3	<0.36	<1.3	<1.3	<0.37	<0.36	<0.37	6.7	<2.6	<0.37	<1.3
cis-1,2-Dichloroethene	980	<0.38	<0.36	<1.3	<1.3	<0.38	<1.3	<1.3	<0.38	<0.38	<0.38	4.4	<0.53	<0.38	<1.3
Ethyl Acetate	490,000	<2.7	<2.7	<13	<13	5.1	<13	<13	4.4	<2.7	<2.7	<27	3.7	<2.7	<13
Ethylbenzene	13,000	0.75	0.68	<1.3	<1.8	1.4	<1.6	<1.3	1.6	<0.79	0.75	<2.6	2.1	0.49	<1.6
4-Ethyltoluene	NA	0.38	0.45	<1.3	<1.3	0.44	<1.3	<1.3	0.48	<0.38	<0.38	<2.6	0.89	<0.38	<1.3
n-Heptane	470,000	0.42	<0.35	<1.4	4.1	0.95	2.0	<1.4	2.1	<0.35	0.44	<2.7	<2.7	0.47	<1.5
n-Hexane	110,000	1.1	0.45	<1.8	10	2.4	4.7	2.8	5.1	<0.46	1.2	14	2.3	1.0	2.3
Isopropanol		<14	<14	<70	<14	42	<70	<70	43	<14	19	<140	47	<17	<70
4-methyl-2-pentanone	410,000	<0.38	<0.38	<1.3	<1.3	0.72	<1.3	<1.3	0.64	<0.38	<0.38	<2.6	<2.6	<0.38	<1.3
Naphthalene	280	<0.37	0.46	<1.4	<1.4	<0.37	<1.4	<1.4	0.58	<0.37	<0.37	<2.8	0.59	<0.37	<1.4
Propylene		<2.6	11	<13	130	66	30	<13	22	<2.6	41	950	37	130	56
Styrene	7,100	<0.38	<0.38	<1.3	<1.3	<0.38	<1.3	<1.3	<0.38	<0.38	<0.38	<2.6	0.49	<0.38	<1.3
Tetrachloroethene	3,300	<0.37	<0.37	<1.3	<1.3	<0.37	<1.3	<1.3	<0.37	<0.37	<0.37	<2.6	0.65	<0.37	<1.3
Tetrahydrofuran	3,400	<1.3	<1.3	<6.7	<6.7	1.6	<6.7	<6.7	2.2	<1.3	<1.3	<13	<2.7	<1.3	<6.7
Toluene	740,000	5.3	2.8	8.4	18	9.7	14	13	15	4.0	6.3	13	19	4.6	14
1,1,1-Trichloroethane	610,000	<0.37	<0.37	<1.3	<1.3	0.55	<1.3	<1.4	<0.37	<0.37	<0.37	<2.6	<0.37	<0.37	<1.3
Trichloroethene	210	<0.37	<0.37	7.9	<1.3	9.8	2.2	<1.3	3.8	<0.37	<0.37	9.9	<0.37	2.1	240
Trichlorofluoromethane	5,600,000	<0.34	<0.34	5.8	<1.4	14	31	2.4	9.6	<0.34	2.1	17	28	1.1	3.1
1,1,2-Trichlorotrifluoroethane	1,400,000	<0.34	<0.36	<1.3	<1.3	<0.36	<1.3	<1.3	<0.36	<0.36	<0.36	<2.7	<0.39	<0.36	<1.3
1,2,4-Trimethylbenzene	25,000	1.2	2.4	2.2	<1.5	2.2	2.4	<1.4	2.7	2.1	1.5	<2.6	2.7	0.68	2.2
1,3,5-Trimethylbenzene	25,000	<0.38	0.55	<1.3	<1.3	0.47	<1.3	<1.3	0.57	0.43	<0.38	<2.6	0.82	<0.38	<1.3
Xylenes	13,000	3.5	3.3	<3.9	5.9	5.9	6.1	<5.1	7.2	3.9	3.5	<7.8	9.2	2.2	6.4
All other TO-15 compounds	Varies	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
Field Screen															
Oxygen (Ventis Gas Meter)		20.90%	20.90%	16.30%	17.20%	14.40%	9.70%	12.50%	19.80%	21.20%	13.80%	*See field r	1.40%	7.60%	6.70%

1) Soil Gas Screening Value from MDEQ Guidance Document for the Vapor Intrusion Pathway (May 2013)

2) (NA) - Screening Value Not available

3) (ND) - Indicates parameter not detected

4) Nonresidential Landuse Vapor Intrusion Shallow Soil Gas (sub-slab) Screening levels (Samples collected less than or equal to 1.5m (~5 ft) bgs or building foundation)

Note: 1,1,2-Trichlorotrifluoroethane (as listed in the FiberTec analytical report) is the same compound as 1,1,2-Trichloro-1,2,2-trifluoroethane (as listed in the DEQ VI Guidance doc tables; CAS: 76131) DGH 9/5/13

Table 2: Deep Soil-Gas Analytical Results

Compound (Method TO-15), units: ppbv	Nonresidential Landuse Vapor Intrusion Deep Soil Gas Screening Levels	SG-15
Top of vapor point <i>depth below concrete slab</i>		5.00
Bottom of vapor point <i>depth below concrete slab</i>		5.50
Acetone	14,000,000	160
Benzene	6,500	<1.4
2-Butanone	9,400,000	<2.6
Carbon Disulfide	1,200,000	<13
Carbon Tetrachloride	4,600	160
Chloroform	15,000	150
Chloromethane	130,000	<13
Cyclohexane	9,700,000	<13
1,3-Dichlorobenzene	2,800	<1.4
Dichlorodifluoromethane	56,000,000	<13
1,1-Dichloroethene	690,000	<1.3
cis-1,2-Dichloroethene	9,800	<1.3
Ethyl Acetate	4,900,000	<13
Ethylbenzene	130,000	<1.4
4-Ethyltoluene	NA	<1.3
n-Heptane	4,700,000	<1.4
n-Hexane	1,100,000	2.5
Isopropanol		<70
4-methyl-2-pentanone	4,100,000	<1.3
Naphthalene	2,800	<1.4
Propylene		<13
Styrene	71,000	<1.3
Tetrachloroethene	33,000	<1.3
Tetrahydrofuran	34,000	<6.7
Toluene	7,400,000	11
1,1,1-Trichloroethane	6,100,000	<1.3
Trichloroethene	2,100	<1.3
Trichlorofluoromethane	56,000,000	<1.4
1,1,2-Trichlorotrifluoroethane	14,000,000	<1.3
1,2,4-Trimethylbenzene	250,000	2.0
1,3,5-Trimethylbenzene	250,000	<1.3
Xylenes	130,000	5.7
All other TO-15 compounds	Varies	<RL
Field Screen		
Oxygen (Ventis Gas Meter)	NA	6.70%

1) Soil Gas Screening Value from MDEQ Guidance Document for the Vapor Intrusion Pathway (May 2013)

2) (NA) - Screening Value Not available

3) (ND) - Indicates parameter not detected

Note: 1,1,2-Trichlorotrifluoroethane (as listed in the FiberTec analytical report) is the same compound as 1,1,2-Trichloro-1,2,2-trifluoroethane (as listed in the DEQ VI Guidance doc tables; CAS: 76131) DGH 9/5/13

APPENDIX D

FIBERTEC ENVIRONMENTAL SERVICES, INC., LABORATORY REPORTS





Analytical Laboratory

1914 Holloway Drive **8660 S. Mackinaw Trail**
Holt, MI 48842 **Cadillac, MI 49601**
Phone: 517 699 0345 **Phone: 231 775 8368**
Fax: 517 699 0388 **Fax: 231 775 8584**
email: lab@fibertec.us

Industrial Hygiene Services, Inc.

**1914 Holloway Drive
Holt, MI 48842**
Phone: 517 699 0345
Fax: 517 699 0382
email: asbestos@fiberitec.us

Geoprobe

**11766 E. Grand River
Brighton, MI 48116
Phone: 810 220 3300
Fax: 810 220 3311**

Chain of Custody #

113501
PAGE 1 of 2

Client Name: Envirologic Technologies					PARAMETERS					Turnaround		Matrix Code					
Contact Person: Dave Stegrink										<input checked="" type="checkbox"/> 24 hour RUSH <small>(surcharge applies)</small> <input type="checkbox"/> 48 hour RUSH <small>(surcharge applies)</small> <input type="checkbox"/> 72 hour RUSH <small>(surcharge applies)</small> <input checked="" type="checkbox"/> Standard (5-7 bus. days) <input type="checkbox"/> Other: Specify		<input type="checkbox"/> S Soil <input type="checkbox"/> W Water <input type="checkbox"/> A Air <input type="checkbox"/> O Oil <input type="checkbox"/> P Wipe		<input type="checkbox"/> GW Ground Water <input type="checkbox"/> SW Surface Water <input type="checkbox"/> WW Waste Water <input type="checkbox"/> X Other: Specify			
Project Name/ Number: JC BRAU / 100218 C																	
Purchase Order#										Remarks:							
Lab Sample #	Date	Time	Client Sample #	Client Sample Descriptor	MATRIX (SEE RIGHT CORNER FOR CODE)	# OF CONTAINERS	PRESERVED (Y/N)	TO-15									
	8/23/13	8:58A		SG-1	A	1	N+										
		9:23A		SG-4	A	1	N+										
		9:49A		SG-7	A	1	N+										
		10:07A		SG-13	A	1	N+										
		10:30A		SG-15	A	1	N+										
		10:43A		SG-14	A	1	N+										
		10:55A		SG-12	A	1	N+										
		11:04A		SG-11	A	1	N+								water in bottle vac		
		10:14A		SG-10	A	1	N+										
		11:24A		SG-9	A	1	N+										
Comments:																	
Relinquished By: <i>Abbot Webster</i>					Date/ Time 8/23/13 1:45P		Received By: <i>JM Halligan</i>										
Relinquished By:					Date/ Time		Received By:										
Relinquished By:					Date/ Time		Received By Laboratory:										
LAB USE ONLY: Fibertec project number: Laboratory Tracking: Temperature at Receipt: <i>Broomfield</i> 57601																	

LAB USE ONLY

Fiber tec project number

Laboratory Tracking:

Temperature at Boiling:

Temperature at Receipt:

ber:
eipt: Boom Telp
Bottelvael

TERMS & CONDITIONS ON BACK

COC Revision: April, 2006

Fibertec
environmental services

Analytical Laboratory

1914 Holloway Drive 8660 S. Mackinaw Trail
Holt, MI 48842 Cadillac, MI 49601
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Industrial Hygiene Services, Inc.

1914 Holloway Drive 11766 E. Grand River
Holt, MI 48842 Brighton, MI 48116
Phone: 517 699 0345 Phone: 810 220 3300
Fax: 517 699 0382 Fax: 810 220 3311
email: asbestos@fibertec.us

Geoprobe

11766 E. Grand River
Brighton, MI 48116
Phone: 810 220 3300
Fax: 810 220 3311

Chain of Custody #

113502
PAGE 2 of 2

Client Name: Envirologic Technologies					PARAMETERS					Turnaround	Matrix Code				
Contact Person: Dave Stesniak										24 hour RUSH (surcharge applies)	S	Soil	GW	Ground Water	
Project Name/ Number: JCBRAU/100218 C										48 hour RUSH (surcharge applies)	W	Water	SW	Surface Water	
										72 hour RUSH (surcharge applies)	A	Air	WW	Waste Water	
										Standard (5-7 bus. days)	O	Oil	X	Other: Specify	
										Other: Specify	P	Wipe			
										Remarks:					
Lab Sample #	Date	Time	Client Sample #	Client Sample Descriptor	MATRIX (SEE RIGHT CORNER FOR CODE)	# OF CONTAINERS	PRESERVED (Y/N)	TO 15							
8/23/13	11:35A			SG-8	A	1	N								
	11:55A			SG-6	A	1	N								
	12:11P			SG-5	A	1	N								
	12:19P			SG-3	A	1	N								
	12:56P			SG-2	A	1	N								
	—			M-1A	A	1	N								
Comments:															
Relinquished By: <i>Robert Webster</i>				Date/ Time 8/23/13 1:45P		Received By: <i>MM Halligan</i>									
Relinquished By:				Date/ Time		Received By:									
Relinquished By:				Date/ Time		Received By Laboratory:									
LAB USE ONLY: Fibertec project number: Laboratory Tracking: Temperature at Receipt: <i>Room Temp</i> <i>Bottle Vacs</i>															
TERMS & CONDITIONS ON BACK															
COC Revision: April, 2006															

Wednesday, September 04, 2013

Fibertec Project Number: 57601
Project Identification: JCBRAU(11) /100218C
Submittal Date: 08/23/2013

Mr. David Stegink
Envirologic Technologies, Inc.
2960 Interstate Parkway
Kalamazoo, MI 49048

Dear Mr. Stegink,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note samples will be disposed of 30 days after reporting date.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,



Daryl P. Strandbergh
Laboratory Director

DPS/kc

Enclosures

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Client Identification:	Envirologic Technologies, Inc.	Sample Description:	SG-1	Chain of Custody:	113501
Client Project Name:	JCBRAU(11)	Sample No:	1	Collect Date:	08/23/13
Client Project No:	100218C	Sample Matrix:	Air	Collect Time:	08:58

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) (TO-15)		Aliquot ID: 57601-001					Matrix: Air	Analyst: RDK	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone (NN)	U		ppbv	13	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
2. Benzene (NN)	0.39		ppbv	0.38	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
3. Benzyl Chloride (NN)	U		ppbv	0.38	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
4. Bromodichloromethane (NN)	U		ppbv	0.37	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
5. Bromoform (NN)	U		ppbv	0.38	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
6. Bromomethane (NN)	U		ppbv	2.5	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
7. 1,3-Butadiene (NN)	U		ppbv	2.6	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
8. 2-Butanone (NN)	U		ppbv	1.1	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
9. Carbon Disulfide (NN)	U		ppbv	2.6	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
10. Carbon Tetrachloride (NN)	U		ppbv	0.38	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
11. Chlorobenzene (NN)	U		ppbv	0.38	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
12. Chloroethane (NN)	U		ppbv	2.5	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
13. Chloroform (NN)	U		ppbv	0.33	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
14. Chloromethane (NN)	U		ppbv	2.5	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
15. Cyclohexane (NN)	U		ppbv	2.6	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
16. Dibromochloromethane (NN)	U		ppbv	0.37	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
17. 1,2-Dichlorobenzene (NN)	U		ppbv	0.38	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
18. 1,3-Dichlorobenzene (NN)	1.4		ppbv	0.38	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
19. 1,4-Dichlorobenzene (NN)	U		ppbv	0.38	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
20. Dichlorodifluoromethane (NN)	U		ppbv	2.5	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
21. 1,1-Dichloroethane (NN)	U		ppbv	0.37	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
22. 1,2-Dichloroethane (NN)	U		ppbv	0.37	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
23. 1,1-Dichloroethene (NN)	U		ppbv	0.36	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
24. cis-1,2-Dichloroethene (NN)	U		ppbv	0.38	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
25. trans-1,2-Dichloroethene (NN)	U		ppbv	0.33	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
26. 1,2-Dichloropropane (NN)	U		ppbv	1.1	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
27. cis-1,3-Dichloropropene (NN)	U		ppbv	0.36	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
28. trans-1,3-Dichloropropene (NN)	U		ppbv	1.2	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
29. 1,4-Dioxane (NN)	U		ppbv	0.51	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
30. Ethyl Acetate (NN)	U		ppbv	2.7	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
31. Ethylbenzene (NN)	0.75		ppbv	0.38	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
32. Ethylene Dibromide (NN)	U		ppbv	0.36	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
33. 4-Ethyltoluene (NN)	U		ppbv	0.38	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
34. n-Heptane (NN)	0.42		ppbv	0.35	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
35. Hexachlorobutadiene (NN)	U		ppbv	0.38	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
36. n-Hexane (NN)	1.1		ppbv	0.33	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
37. 2-Hexanone (NN)	U		ppbv	1.3	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
38. Isopropanol (NN)	U		ppbv	14	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
39. Methylene Chloride (NN)	U		ppbv	2.6	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A

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Client Identification:	Envirologic Technologies, Inc.	Sample Description:	SG-1	Chain of Custody:	113501
Client Project Name:	JCBRAU(11)	Sample No:	1	Collect Date:	08/23/13
Client Project No:	100218C	Sample Matrix:	Air	Collect Time:	08:58

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) (TO-15)		Aliquot ID: 57601-001					Matrix: Air	Analyst: RDK	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
40. 2-Methylnaphthalene (NN)	U		ppbv	2.4	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
41. 4-Methyl-2-pentanone (NN)	U		ppbv	0.38	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
42. MTBE (NN)	U		ppbv	0.35	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
43. Naphthalene (NN)	U		ppbv	0.37	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
44. Propylene (NN)	U		ppbv	2.6	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
45. Styrene (NN)	U		ppbv	0.38	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
46. 1,1,2,2-Tetrachloroethane (NN)	U		ppbv	0.38	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
47. Tetrachloroethene (NN)	U		ppbv	0.37	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
48. Tetrahydrofuran (NN)	U		ppbv	1.3	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
49. Toluene (NN)	5.3		ppbv	0.38	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
50. 1,2,4-Trichlorobenzene (NN)	U		ppbv	0.38	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
51. 1,1,1-Trichloroethane (NN)	U		ppbv	0.37	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
52. 1,1,2-Trichloroethane (NN)	U		ppbv	0.38	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
53. Trichloroethene (NN)	U		ppbv	0.37	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
54. Trichlorofluoromethane (NN)	U		ppbv	0.34	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
55. 1,1,2-Trichlorotrifluoroethane (NN)	U		ppbv	0.36	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
56. 1,2,4-Trimethylbenzene (NN)	1.2		ppbv	0.38	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
57. 1,3,5-Trimethylbenzene (NN)	U		ppbv	0.38	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
58. Vinyl Acetate (NN)	U		ppbv	2.7	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
59. Vinyl Chloride (NN)	U		ppbv	1.4	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
60. m&p-Xylene (NN)	2.5		ppbv	0.76	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
61. o-Xylene (NN)	0.98		ppbv	0.38	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A
62. Xylenes (NN)	3.5		ppbv	1.1	1.0	08/27/13	VA13H27A	08/27/13	VA13H27A

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Client Identification:	Envirologic Technologies, Inc.	Sample Description:	SG-4	Chain of Custody:	113501
Client Project Name:	JCBRAU(11)	Sample No:	2	Collect Date:	08/23/13
Client Project No:	100218C	Sample Matrix:	Air	Collect Time:	09:23

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) (TO-15)		Aliquot ID: 57601-002					Matrix: Air	Analyst: RDK	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone (NN)	78		ppbv	28	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
2. Benzene (NN)	2.1		ppbv	1.3	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
3. Benzyl Chloride (NN)	U		ppbv	1.3	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
4. Bromodichloromethane (NN)	U		ppbv	1.3	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
5. Bromoform (NN)	U		ppbv	1.3	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
6. Bromomethane (NN)	U		ppbv	12	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
7. 1,3-Butadiene (NN)	U		ppbv	13	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
8. 2-Butanone (NN)	U		ppbv	3.0	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
9. Carbon Disulfide (NN)	130		ppbv	13	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
10. Carbon Tetrachloride (NN)	4.8		ppbv	1.3	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
11. Chlorobenzene (NN)	U		ppbv	1.3	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
12. Chloroethane (NN)	U		ppbv	12	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
13. Chloroform (NN)	3.1		ppbv	1.4	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
14. Chloromethane (NN)	U		ppbv	13	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
15. Cyclohexane (NN)	U		ppbv	13	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
16. Dibromochloromethane (NN)	U		ppbv	1.4	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
17. 1,2-Dichlorobenzene (NN)	U		ppbv	1.3	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
18. 1,3-Dichlorobenzene (NN)	3.4		ppbv	1.3	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
19. 1,4-Dichlorobenzene (NN)	U		ppbv	1.3	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
20. Dichlorodifluoromethane (NN)	U		ppbv	13	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
21. 1,1-Dichloroethane (NN)	U		ppbv	1.3	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
22. 1,2-Dichloroethane (NN)	U		ppbv	1.3	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
23. 1,1-Dichloroethene (NN)	U		ppbv	1.3	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
24. cis-1,2-Dichloroethene (NN)	U		ppbv	1.3	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
25. trans-1,2-Dichloroethene (NN)	U		ppbv	1.3	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
26. 1,2-Dichloropropane (NN)	U		ppbv	1.3	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
27. cis-1,3-Dichloropropene (NN)	U		ppbv	1.4	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
28. trans-1,3-Dichloropropene (NN)	U		ppbv	6.0	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
29. 1,4-Dioxane (NN)	U		ppbv	2.6	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
30. Ethyl Acetate (NN)	U		ppbv	13	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
31. Ethylbenzene (NN)	U		ppbv	1.8	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
32. Ethylene Dibromide (NN)	U		ppbv	1.2	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
33. 4-Ethyltoluene (NN)	U		ppbv	1.3	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
34. n-Heptane (NN)	4.1		ppbv	1.4	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
35. Hexachlorobutadiene (NN)	U		ppbv	1.3	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
36. n-Hexane (NN)	10		ppbv	1.4	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
37. 2-Hexanone (NN)	U		ppbv	6.6	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
38. Isopropanol (NN)	U		ppbv	70	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
39. Methylene Chloride (NN)	U		ppbv	13	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A

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Client Identification:	Envirologic Technologies, Inc.	Sample Description:	SG-4	Chain of Custody:	113501
Client Project Name:	JCBRAU(11)	Sample No:	2	Collect Date:	08/23/13
Client Project No:	100218C	Sample Matrix:	Air	Collect Time:	09:23

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) (TO-15)	Aliquot ID: 57601-002						Matrix: Air	Analyst: RDK	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
40. 2-Methylnaphthalene (NN)	U		ppbv	12	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
41. 4-Methyl-2-pentanone (NN)	U		ppbv	1.3	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
42. MTBE (NN)	U		ppbv	1.3	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
43. Naphthalene (NN)	U		ppbv	1.4	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
44. Propylene (NN)	130		ppbv	13	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
45. Styrene (NN)	U		ppbv	1.3	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
46. 1,1,2,2-Tetrachloroethane (NN)	U		ppbv	1.3	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
47. Tetrachloroethene (NN)	U		ppbv	1.3	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
48. Tetrahydrofuran (NN)	U		ppbv	6.7	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
49. Toluene (NN)	18		ppbv	1.3	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
50. 1,2,4-Trichlorobenzene (NN)	U		ppbv	1.3	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
51. 1,1,1-Trichloroethane (NN)	U		ppbv	1.3	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
52. 1,1,2-Trichloroethane (NN)	U		ppbv	1.3	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
53. Trichloroethene (NN)	U		ppbv	1.3	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
54. Trichlorofluoromethane (NN)	U		ppbv	1.4	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
55. 1,1,2-Trichlorotrifluoroethane (NN)	U		ppbv	1.3	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
56. 1,2,4-Trimethylbenzene (NN)	U		ppbv	1.5	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
57. 1,3,5-Trimethylbenzene (NN)	U		ppbv	1.3	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
58. Vinyl Acetate (NN)	U		ppbv	13	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
59. Vinyl Chloride (NN)	U		ppbv	6.9	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
60. m&p-Xylene (NN)	4.4		ppbv	2.6	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
61. o-Xylene (NN)	U		ppbv	1.6	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A
62. Xylenes (NN)	5.9		ppbv	3.9	5.0	08/27/13	VA13H27A	08/28/13	VA13H27A

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Client Identification:	Envirologic Technologies, Inc.	Sample Description:	SG-7	Chain of Custody:	113501
Client Project Name:	JCBRAU(11)	Sample No:	3	Collect Date:	08/23/13
Client Project No:	100218C	Sample Matrix:	Air	Collect Time:	09:49

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) (TO-15)		Aliquot ID: 57601-003					Matrix: Air	Analyst: RDK	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone (NN)	130		ppbv	28	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
2. Benzene (NN)	U		ppbv	1.5	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
3. Benzyl Chloride (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
4. Bromodichloromethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
5. Bromoform (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
6. Bromomethane (NN)	U		ppbv	12	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
7. 1,3-Butadiene (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
8. 2-Butanone (NN)	U		ppbv	2.5	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
9. Carbon Disulfide (NN)	19		ppbv	13	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
10. Carbon Tetrachloride (NN)	3.7		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
11. Chlorobenzene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
12. Chloroethane (NN)	U		ppbv	12	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
13. Chloroform (NN)	2.5		ppbv	1.4	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
14. Chloromethane (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
15. Cyclohexane (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
16. Dibromochloromethane (NN)	U		ppbv	1.4	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
17. 1,2-Dichlorobenzene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
18. 1,3-Dichlorobenzene (NN)	2.9		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
19. 1,4-Dichlorobenzene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
20. Dichlorodifluoromethane (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
21. 1,1-Dichloroethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
22. 1,2-Dichloroethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
23. 1,1-Dichloroethene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
24. cis-1,2-Dichloroethene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
25. trans-1,2-Dichloroethene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
26. 1,2-Dichloropropane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
27. cis-1,3-Dichloropropene (NN)	U		ppbv	1.4	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
28. trans-1,3-Dichloropropene (NN)	U		ppbv	6.0	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
29. 1,4-Dioxane (NN)	U		ppbv	2.6	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
30. Ethyl Acetate (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
31. Ethylbenzene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
32. Ethylene Dibromide (NN)	U		ppbv	1.2	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
33. 4-Ethyltoluene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
34. n-Heptane (NN)	U		ppbv	1.4	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
35. Hexachlorobutadiene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
36. n-Hexane (NN)	2.8		ppbv	1.4	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
37. 2-Hexanone (NN)	U		ppbv	6.6	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
38. Isopropanol (NN)	U		ppbv	70	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
39. Methylene Chloride (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A

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Client Identification:	Envirologic Technologies, Inc.	Sample Description:	SG-7	Chain of Custody:	113501
Client Project Name:	JCBRAU(11)	Sample No:	3	Collect Date:	08/23/13
Client Project No:	100218C	Sample Matrix:	Air	Collect Time:	09:49

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) (TO-15)		Aliquot ID: 57601-003					Matrix: Air	Analyst: RDK	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
40. 2-Methylnaphthalene (NN)	U		ppbv	12	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
41. 4-Methyl-2-pentanone (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
42. MTBE (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
43. Naphthalene (NN)	U		ppbv	1.4	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
44. Propylene (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
45. Styrene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
46. 1,1,2,2-Tetrachloroethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
47. Tetrachloroethene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
48. Tetrahydrofuran (NN)	U		ppbv	6.7	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
49. Toluene (NN)	13		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
50. 1,2,4-Trichlorobenzene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
51. 1,1,1-Trichloroethane (NN)	U		ppbv	1.4	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
52. 1,1,2-Trichloroethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
53. Trichloroethene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
54. Trichlorofluoromethane (NN)	2.4		ppbv	1.4	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
55. 1,1,2-Trichlorotrifluoroethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
56. 1,2,4-Trimethylbenzene (NN)	U		ppbv	1.4	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
57. 1,3,5-Trimethylbenzene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
58. Vinyl Acetate (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
59. Vinyl Chloride (NN)	U		ppbv	6.9	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
60. m&p-Xylene (NN)	U		ppbv	3.7	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
61. o-Xylene (NN)	U		ppbv	1.4	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
62. Xylenes (NN)	U		ppbv	5.1	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A

Client Identification:	Envirologic Technologies, Inc.	Sample Description:	SG-13	Chain of Custody:	113501
Client Project Name:	JCBRAU(11)	Sample No:	4	Collect Date:	08/23/13
Client Project No:	100218C	Sample Matrix:	Air	Collect Time:	10:07

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) (TO-15)		Aliquot ID: 57601-004					Matrix: Air	Analyst: DAR	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone (NN)	70		ppbv	5.6	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
2. Benzene (NN)	0.57		ppbv	0.38	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
3. Benzyl Chloride (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
4. Bromodichloromethane (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
5. Bromoform (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
6. Bromomethane (NN)	U		ppbv	2.5	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
7. 1,3-Butadiene (NN)	U		ppbv	2.6	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
8. 2-Butanone (NN)	1.2		ppbv	1.1	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
9. Carbon Disulfide (NN)	2.9		ppbv	2.6	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
10. Carbon Tetrachloride (NN)	150		ppbv	1.3	5.0	09/03/13	V413I03A	09/03/13	V413I03A
11. Chlorobenzene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
12. Chloroethane (NN)	U		ppbv	2.5	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
13. Chloroform (NN)	160		ppbv	2.7	5.0	09/03/13	V413I03A	09/03/13	V413I03A
14. Chloromethane (NN)	U		ppbv	2.5	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
15. Cyclohexane (NN)	U		ppbv	2.6	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
16. Dibromochloromethane (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
17. 1,2-Dichlorobenzene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
18. 1,3-Dichlorobenzene (NN)	0.44		ppbv	0.38	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
19. 1,4-Dichlorobenzene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
20. Dichlorodifluoromethane (NN)	U		ppbv	2.5	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
21. 1,1-Dichloroethane (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
22. 1,2-Dichloroethane (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
23. 1,1-Dichloroethene (NN)	1.0		ppbv	0.36	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
24. cis-1,2-Dichloroethene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
25. trans-1,2-Dichloroethene (NN)	U		ppbv	0.33	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
26. 1,2-Dichloropropane (NN)	U		ppbv	1.1	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
27. cis-1,3-Dichloropropene (NN)	U		ppbv	0.36	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
28. trans-1,3-Dichloropropene (NN)	U		ppbv	1.2	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
29. 1,4-Dioxane (NN)	U		ppbv	0.51	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
30. Ethyl Acetate (NN)	U		ppbv	2.7	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
31. Ethylbenzene (NN)	0.49		ppbv	0.38	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
32. Ethylene Dibromide (NN)	U		ppbv	0.36	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
33. 4-Ethyltoluene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
34. n-Heptane (NN)	0.47		ppbv	0.35	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
35. Hexachlorobutadiene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
36. n-Hexane (NN)	1.0		ppbv	0.33	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
37. 2-Hexanone (NN)	U		ppbv	1.3	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
38. Isopropanol (NN)	U		ppbv	17	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
39. Methylene Chloride (NN)	U		ppbv	6.3	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A

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Client Identification:	Envirologic Technologies, Inc.	Sample Description:	SG-13	Chain of Custody:	113501
Client Project Name:	JCBRAU(11)	Sample No:	4	Collect Date:	08/23/13
Client Project No:	100218C	Sample Matrix:	Air	Collect Time:	10:07

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) (TO-15)		Aliquot ID: 57601-004					Matrix: Air	Analyst: DAR	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
40. 2-Methylnaphthalene (NN)	U		ppbv	2.4	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
41. 4-Methyl-2-pentanone (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
42. MTBE (NN)	U		ppbv	0.35	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
43. Naphthalene (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
44. Propylene (NN)	130		ppbv	13	5.0	09/03/13	V413I03A	09/03/13	V413I03A
45. Styrene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
46. 1,1,2,2-Tetrachloroethane (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
47. Tetrachloroethene (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
48. Tetrahydrofuran (NN)	U		ppbv	1.3	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
49. Toluene (NN)	4.6		ppbv	0.38	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
50. 1,2,4-Trichlorobenzene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
51. 1,1,1-Trichloroethane (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
52. 1,1,2-Trichloroethane (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
53. Trichloroethene (NN)	2.1		ppbv	0.37	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
54. Trichlorofluoromethane (NN)	1.1		ppbv	0.34	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
55. 1,1,2-Trichlorotrifluoroethane (NN)	U		ppbv	0.36	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
56. 1,2,4-Trimethylbenzene (NN)	0.68		ppbv	0.38	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
57. 1,3,5-Trimethylbenzene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
58. Vinyl Acetate (NN)	U		ppbv	2.7	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
59. Vinyl Chloride (NN)	U		ppbv	1.4	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
60. m&p-Xylene (NN)	1.6		ppbv	0.76	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
61. o-Xylene (NN)	0.60		ppbv	0.38	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A
62. Xylenes (NN)	2.2		ppbv	1.1	1.0	08/28/13	VA13H28A	08/28/13	VA13H28A

Client Identification:	Envirologic Technologies, Inc.	Sample Description:	SG-15	Chain of Custody:	113501
Client Project Name:	JCBRAU(11)	Sample No:	5	Collect Date:	08/23/13
Client Project No:	100218C	Sample Matrix:	Air	Collect Time:	10:30

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) (TO-15)		Aliquot ID: 57601-005					Matrix: Air	Analyst: RDK	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone (NN)	160		ppbv	28	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
2. Benzene (NN)	U		ppbv	1.4	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
3. Benzyl Chloride (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
4. Bromodichloromethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
5. Bromoform (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
6. Bromomethane (NN)	U		ppbv	12	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
7. 1,3-Butadiene (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
8. 2-Butanone (NN)	U		ppbv	2.6	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
9. Carbon Disulfide (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
10. Carbon Tetrachloride (NN)	160		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
11. Chlorobenzene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
12. Chloroethane (NN)	U		ppbv	12	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
13. Chloroform (NN)	150		ppbv	1.4	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
14. Chloromethane (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
15. Cyclohexane (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
16. Dibromochloromethane (NN)	U		ppbv	1.4	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
17. 1,2-Dichlorobenzene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
18. 1,3-Dichlorobenzene (NN)	U		ppbv	1.4	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
19. 1,4-Dichlorobenzene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
20. Dichlorodifluoromethane (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
21. 1,1-Dichloroethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
22. 1,2-Dichloroethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
23. 1,1-Dichloroethene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
24. cis-1,2-Dichloroethene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
25. trans-1,2-Dichloroethene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
26. 1,2-Dichloropropane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
27. cis-1,3-Dichloropropene (NN)	U		ppbv	1.4	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
28. trans-1,3-Dichloropropene (NN)	U		ppbv	6.0	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
29. 1,4-Dioxane (NN)	U		ppbv	2.6	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
30. Ethyl Acetate (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
31. Ethylbenzene (NN)	U		ppbv	1.4	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
32. Ethylene Dibromide (NN)	U		ppbv	1.2	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
33. 4-Ethyltoluene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
34. n-Heptane (NN)	U		ppbv	1.4	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
35. Hexachlorobutadiene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
36. n-Hexane (NN)	2.5		ppbv	1.4	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
37. 2-Hexanone (NN)	U		ppbv	6.6	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
38. Isopropanol (NN)	U		ppbv	70	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
39. Methylene Chloride (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A

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Client Identification:	Envirologic Technologies, Inc.	Sample Description:	SG-15	Chain of Custody:	113501
Client Project Name:	JCBRAU(11)	Sample No:	5	Collect Date:	08/23/13
Client Project No:	100218C	Sample Matrix:	Air	Collect Time:	10:30

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) (TO-15)		Aliquot ID: 57601-005					Matrix: Air	Analyst: RDK	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
40. 2-Methylnaphthalene (NN)	U		ppbv	12	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
41. 4-Methyl-2-pentanone (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
42. MTBE (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
43. Naphthalene (NN)	U		ppbv	1.4	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
44. Propylene (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
45. Styrene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
46. 1,1,2,2-Tetrachloroethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
47. Tetrachloroethene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
48. Tetrahydrofuran (NN)	U		ppbv	6.7	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
49. Toluene (NN)	11		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
50. 1,2,4-Trichlorobenzene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
51. 1,1,1-Trichloroethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
52. 1,1,2-Trichloroethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
53. Trichloroethene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
54. Trichlorofluoromethane (NN)	U		ppbv	1.4	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
55. 1,1,2-Trichlorotrifluoroethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
56. 1,2,4-Trimethylbenzene (NN)	2.0		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
57. 1,3,5-Trimethylbenzene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
58. Vinyl Acetate (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
59. Vinyl Chloride (NN)	U		ppbv	6.9	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
60. m&p-Xylene (NN)	4.3		ppbv	2.6	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
61. o-Xylene (NN)	U		ppbv	1.5	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
62. Xylenes (NN)	5.7		ppbv	3.9	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A

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Client Identification:	Envirologic Technologies, Inc.	Sample Description:	SG-14	Chain of Custody:	113501
Client Project Name:	JCBRAU(11)	Sample No:	6	Collect Date:	08/23/13
Client Project No:	100218C	Sample Matrix:	Air	Collect Time:	10:43

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) (TO-15)		Aliquot ID: 57601-006					Matrix: Air	Analyst: DAR	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone (NN)	190		ppbv	28	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
2. Benzene (NN)	U		ppbv	1.8	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
3. Benzyl Chloride (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
4. Bromodichloromethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
5. Bromoform (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
6. Bromomethane (NN)	U		ppbv	12	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
7. 1,3-Butadiene (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
8. 2-Butanone (NN)	U		ppbv	5.1	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
9. Carbon Disulfide (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
10. Carbon Tetrachloride (NN)	15000		ppbv	160	610	09/03/13	V413I03A	09/03/13	V413I03A
11. Chlorobenzene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
12. Chloroethane (NN)	U		ppbv	12	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
13. Chloroform (NN)	10000		ppbv	320	610	09/03/13	V413I03A	09/03/13	V413I03A
14. Chloromethane (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
15. Cyclohexane (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
16. Dibromochloromethane (NN)	U		ppbv	1.4	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
17. 1,2-Dichlorobenzene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
18. 1,3-Dichlorobenzene (NN)	2.4		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
19. 1,4-Dichlorobenzene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
20. Dichlorodifluoromethane (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
21. 1,1-Dichloroethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
22. 1,2-Dichloroethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
23. 1,1-Dichloroethene (NN)	18		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
24. cis-1,2-Dichloroethene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
25. trans-1,2-Dichloroethene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
26. 1,2-Dichloropropane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
27. cis-1,3-Dichloropropene (NN)	U		ppbv	1.4	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
28. trans-1,3-Dichloropropene (NN)	U		ppbv	6.0	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
29. 1,4-Dioxane (NN)	U		ppbv	2.6	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
30. Ethyl Acetate (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
31. Ethylbenzene (NN)	U		ppbv	1.6	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
32. Ethylene Dibromide (NN)	U		ppbv	1.2	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
33. 4-Ethyltoluene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
34. n-Heptane (NN)	U		ppbv	1.5	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
35. Hexachlorobutadiene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
36. n-Hexane (NN)	2.3		ppbv	1.4	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
37. 2-Hexanone (NN)	U		ppbv	6.6	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
38. Isopropanol (NN)	U		ppbv	70	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
39. Methylene Chloride (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A

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Client Identification:	Envirologic Technologies, Inc.	Sample Description:	SG-14	Chain of Custody:	113501
Client Project Name:	JCBRAU(11)	Sample No:	6	Collect Date:	08/23/13
Client Project No:	100218C	Sample Matrix:	Air	Collect Time:	10:43

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) (TO-15)		Aliquot ID: 57601-006					Matrix: Air	Analyst: DAR	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
40. 2-Methylnaphthalene (NN)	U		ppbv	12	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
41. 4-Methyl-2-pentanone (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
42. MTBE (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
43. Naphthalene (NN)	U		ppbv	1.4	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
44. Propylene (NN)	56		ppbv	13	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
45. Styrene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
46. 1,1,2,2-Tetrachloroethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
47. Tetrachloroethene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
48. Tetrahydrofuran (NN)	U		ppbv	6.7	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
49. Toluene (NN)	14		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
50. 1,2,4-Trichlorobenzene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
51. 1,1,1-Trichloroethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
52. 1,1,2-Trichloroethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
53. Trichloroethene (NN)	240		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
54. Trichlorofluoromethane (NN)	3.1		ppbv	1.4	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
55. 1,1,2-Trichlorotrifluoroethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
56. 1,2,4-Trimethylbenzene (NN)	2.2		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
57. 1,3,5-Trimethylbenzene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
58. Vinyl Acetate (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
59. Vinyl Chloride (NN)	U		ppbv	6.9	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
60. m&p-Xylene (NN)	4.6		ppbv	2.6	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
61. o-Xylene (NN)	1.7		ppbv	1.3	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A
62. Xylenes (NN)	6.4		ppbv	3.9	5.0	08/28/13	VA13H28A	08/28/13	VA13H28A

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Client Identification:	Envirologic Technologies, Inc.	Sample Description:	SG-12	Chain of Custody:	113501
Client Project Name:	JCBRAU(11)	Sample No:	7	Collect Date:	08/23/13
Client Project No:	100218C	Sample Matrix:	Air	Collect Time:	10:55

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) (TO-15)		Aliquot ID: 57601-007					Matrix: Air	Analyst: DAR	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone (NN)	290		ppbv	14	5.0	09/04/13	V413I04A	09/04/13	V413I04A
2. Benzene (NN)	1.7		ppbv	0.52	1.0	09/03/13	V413I03A	09/03/13	V413I03A
3. Benzyl Chloride (NN)	U		ppbv	0.38	1.0	09/03/13	V413I03A	09/03/13	V413I03A
4. Bromodichloromethane (NN)	U		ppbv	0.37	1.0	09/03/13	V413I03A	09/03/13	V413I03A
5. Bromoform (NN)	U		ppbv	0.38	1.0	09/03/13	V413I03A	09/03/13	V413I03A
6. Bromomethane (NN)	U		ppbv	1.1	1.0	09/03/13	V413I03A	09/03/13	V413I03A
7. 1,3-Butadiene (NN)	U		ppbv	2.6	1.0	09/03/13	V413I03A	09/03/13	V413I03A
8. 2-Butanone (NN)	4.2		ppbv	2.7	1.0	09/03/13	V413I03A	09/03/13	V413I03A
9. Carbon Disulfide (NN)	12		ppbv	2.6	1.0	09/03/13	V413I03A	09/03/13	V413I03A
10. Carbon Tetrachloride (NN)	1.2		ppbv	0.38	1.0	09/03/13	V413I03A	09/03/13	V413I03A
11. Chlorobenzene (NN)	U		ppbv	0.38	1.0	09/03/13	V413I03A	09/03/13	V413I03A
12. Chloroethane (NN)	U		ppbv	2.5	1.0	09/03/13	V413I03A	09/03/13	V413I03A
13. Chloroform (NN)	3.9		ppbv	0.53	1.0	09/03/13	V413I03A	09/03/13	V413I03A
14. Chloromethane (NN)	U		ppbv	2.5	1.0	09/03/13	V413I03A	09/03/13	V413I03A
15. Cyclohexane (NN)	U		ppbv	2.6	1.0	09/03/13	V413I03A	09/03/13	V413I03A
16. Dibromochloromethane (NN)	U		ppbv	0.37	1.0	09/03/13	V413I03A	09/03/13	V413I03A
17. 1,2-Dichlorobenzene (NN)	U		ppbv	0.38	1.0	09/03/13	V413I03A	09/03/13	V413I03A
18. 1,3-Dichlorobenzene (NN)	3.5		ppbv	0.38	1.0	09/03/13	V413I03A	09/03/13	V413I03A
19. 1,4-Dichlorobenzene (NN)	U		ppbv	0.38	1.0	09/03/13	V413I03A	09/03/13	V413I03A
20. Dichlorodifluoromethane (NN)	1.1		ppbv	0.51	1.0	09/03/13	V413I03A	09/03/13	V413I03A
21. 1,1-Dichloroethane (NN)	U		ppbv	2.6	1.0	09/03/13	V413I03A	09/03/13	V413I03A
22. 1,2-Dichloroethane (NN)	U		ppbv	0.37	1.0	09/03/13	V413I03A	09/03/13	V413I03A
23. 1,1-Dichloroethene (NN)	U		ppbv	0.36	1.0	09/03/13	V413I03A	09/03/13	V413I03A
24. cis-1,2-Dichloroethene (NN)	U		ppbv	0.53	1.0	09/03/13	V413I03A	09/03/13	V413I03A
25. trans-1,2-Dichloroethene (NN)	U		ppbv	2.6	1.0	09/03/13	V413I03A	09/03/13	V413I03A
26. 1,2-Dichloropropane (NN)	U		ppbv	2.6	1.0	09/03/13	V413I03A	09/03/13	V413I03A
27. cis-1,3-Dichloropropene (NN)	U		ppbv	0.55	1.0	09/03/13	V413I03A	09/03/13	V413I03A
28. trans-1,3-Dichloropropene (NN)	U		ppbv	0.48	1.0	09/03/13	V413I03A	09/03/13	V413I03A
29. 1,4-Dioxane (NN)	U		ppbv	2.6	1.0	09/03/13	V413I03A	09/03/13	V413I03A
30. Ethyl Acetate (NN)	3.7		ppbv	2.7	1.0	09/03/13	V413I03A	09/03/13	V413I03A
31. Ethylbenzene (NN)	2.1		ppbv	0.38	1.0	09/03/13	V413I03A	09/03/13	V413I03A
32. Ethylene Dibromide (NN)	U		ppbv	0.36	1.0	09/03/13	V413I03A	09/03/13	V413I03A
33. 4-Ethyltoluene (NN)	0.89		ppbv	0.38	1.0	09/03/13	V413I03A	09/03/13	V413I03A
34. n-Heptane (NN)	U		ppbv	2.7	1.0	09/03/13	V413I03A	09/03/13	V413I03A
35. Hexachlorobutadiene (NN)	U		ppbv	0.38	1.0	09/03/13	V413I03A	09/03/13	V413I03A
36. n-Hexane (NN)	2.3		ppbv	0.53	1.0	09/03/13	V413I03A	09/03/13	V413I03A
37. 2-Hexanone (NN)	U		ppbv	2.7	1.0	09/03/13	V413I03A	09/03/13	V413I03A
38. Isopropanol (NN)	47		ppbv	2.8	1.0	09/03/13	V413I03A	09/03/13	V413I03A
39. Methylene Chloride (NN)	U		ppbv	2.6	1.0	09/03/13	V413I03A	09/03/13	V413I03A

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Client Identification:	Envirologic Technologies, Inc.	Sample Description:	SG-12	Chain of Custody:	113501
Client Project Name:	JCBRAU(11)	Sample No:	7	Collect Date:	08/23/13
Client Project No:	100218C	Sample Matrix:	Air	Collect Time:	10:55

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) (TO-15)		Aliquot ID: 57601-007					Matrix: Air	Analyst: DAR	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
40. 2-Methylnaphthalene (NN)	U		ppbv	2.4	1.0	09/03/13	V413I03A	09/03/13	V413I03A
41. 4-Methyl-2-pentanone (NN)	U		ppbv	2.6	1.0	09/03/13	V413I03A	09/03/13	V413I03A
42. MTBE (NN)	U		ppbv	0.53	1.0	09/03/13	V413I03A	09/03/13	V413I03A
43. Naphthalene (NN)	0.59		ppbv	0.37	1.0	09/03/13	V413I03A	09/03/13	V413I03A
44. Propylene (NN)	37		ppbv	2.6	1.0	09/03/13	V413I03A	09/03/13	V413I03A
45. Styrene (NN)	0.49		ppbv	0.38	1.0	09/03/13	V413I03A	09/03/13	V413I03A
46. 1,1,2,2-Tetrachloroethane (NN)	U		ppbv	0.53	1.0	09/03/13	V413I03A	09/03/13	V413I03A
47. Tetrachloroethene (NN)	0.65		ppbv	0.37	1.0	09/03/13	V413I03A	09/03/13	V413I03A
48. Tetrahydrofuran (NN)	U		ppbv	2.7	1.0	09/03/13	V413I03A	09/03/13	V413I03A
49. Toluene (NN)	19		ppbv	0.38	1.0	09/03/13	V413I03A	09/03/13	V413I03A
50. 1,2,4-Trichlorobenzene (NN)	U		ppbv	0.38	1.0	09/03/13	V413I03A	09/03/13	V413I03A
51. 1,1,1-Trichloroethane (NN)	U		ppbv	0.37	1.0	09/03/13	V413I03A	09/03/13	V413I03A
52. 1,1,2-Trichloroethane (NN)	U		ppbv	0.38	1.0	09/03/13	V413I03A	09/03/13	V413I03A
53. Trichloroethene (NN)	U		ppbv	0.37	1.0	09/03/13	V413I03A	09/03/13	V413I03A
54. Trichlorofluoromethane (NN)	28		ppbv	0.34	1.0	09/03/13	V413I03A	09/03/13	V413I03A
55. 1,1,2-Trichlorotrifluoroethane (NN)	0.39		ppbv	0.36	1.0	09/03/13	V413I03A	09/03/13	V413I03A
56. 1,2,4-Trimethylbenzene (NN)	2.7		ppbv	0.38	1.0	09/03/13	V413I03A	09/03/13	V413I03A
57. 1,3,5-Trimethylbenzene (NN)	0.82		ppbv	0.38	1.0	09/03/13	V413I03A	09/03/13	V413I03A
58. Vinyl Acetate (NN)	U		ppbv	2.7	1.0	09/03/13	V413I03A	09/03/13	V413I03A
59. Vinyl Chloride (NN)	U		ppbv	0.51	1.0	09/03/13	V413I03A	09/03/13	V413I03A
60. m&p-Xylene (NN)	6.7		ppbv	0.76	1.0	09/03/13	V413I03A	09/03/13	V413I03A
61. o-Xylene (NN)	2.5		ppbv	0.38	1.0	09/03/13	V413I03A	09/03/13	V413I03A
62. Xylenes (NN)	9.2		ppbv	1.1	1.0	09/03/13	V413I03A	09/03/13	V413I03A

Client Identification:	Envirologic Technologies, Inc.	Sample Description:	SG-11	Chain of Custody:	113501
Client Project Name:	JCBRAU(11)	Sample No:	8	Collect Date:	08/23/13
Client Project No:	100218C	Sample Matrix:	Air	Collect Time:	11:04

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) (TO-15)		Aliquot ID: 57601-008					Matrix: Air	Analyst: RDK	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone (NN)	180		ppbv	56	10	08/28/13	VA13H28A	08/28/13	VA13H28A
2. Benzene (NN)	3.8		ppbv	2.6	10	08/28/13	VA13H28A	08/28/13	VA13H28A
3. Benzyl Chloride (NN)	U		ppbv	2.5	10	08/28/13	VA13H28A	08/28/13	VA13H28A
4. Bromodichloromethane (NN)	U		ppbv	2.6	10	08/28/13	VA13H28A	08/28/13	VA13H28A
5. Bromoform (NN)	U		ppbv	2.6	10	08/28/13	VA13H28A	08/28/13	VA13H28A
6. Bromomethane (NN)	U		ppbv	25	10	08/28/13	VA13H28A	08/28/13	VA13H28A
7. 1,3-Butadiene (NN)	U		ppbv	26	10	08/28/13	VA13H28A	08/28/13	VA13H28A
8. 2-Butanone (NN)	11		ppbv	2.7	10	08/28/13	VA13H28A	08/28/13	VA13H28A
9. Carbon Disulfide (NN)	U		ppbv	26	10	08/28/13	VA13H28A	08/28/13	VA13H28A
10. Carbon Tetrachloride (NN)	89		ppbv	2.6	10	08/28/13	VA13H28A	08/28/13	VA13H28A
11. Chlorobenzene (NN)	U		ppbv	2.7	10	08/28/13	VA13H28A	08/28/13	VA13H28A
12. Chloroethane (NN)	U		ppbv	25	10	08/28/13	VA13H28A	08/28/13	VA13H28A
13. Chloroform (NN)	260		ppbv	2.7	10	08/28/13	VA13H28A	08/28/13	VA13H28A
14. Chloromethane (NN)	U		ppbv	25	10	08/28/13	VA13H28A	08/28/13	VA13H28A
15. Cyclohexane (NN)	U		ppbv	26	10	08/28/13	VA13H28A	08/28/13	VA13H28A
16. Dibromochloromethane (NN)	U		ppbv	2.9	10	08/28/13	VA13H28A	08/28/13	VA13H28A
17. 1,2-Dichlorobenzene (NN)	U		ppbv	2.6	10	08/28/13	VA13H28A	08/28/13	VA13H28A
18. 1,3-Dichlorobenzene (NN)	U		ppbv	2.8	10	08/28/13	VA13H28A	08/28/13	VA13H28A
19. 1,4-Dichlorobenzene (NN)	U		ppbv	2.6	10	08/28/13	VA13H28A	08/28/13	VA13H28A
20. Dichlorodifluoromethane (NN)	U		ppbv	25	10	08/28/13	VA13H28A	08/28/13	VA13H28A
21. 1,1-Dichloroethane (NN)	U		ppbv	2.6	10	08/28/13	VA13H28A	08/28/13	VA13H28A
22. 1,2-Dichloroethane (NN)	U		ppbv	2.6	10	08/28/13	VA13H28A	08/28/13	VA13H28A
23. 1,1-Dichloroethene (NN)	6.7		ppbv	2.7	10	08/28/13	VA13H28A	08/28/13	VA13H28A
24. cis-1,2-Dichloroethene (NN)	4.4		ppbv	2.7	10	08/28/13	VA13H28A	08/28/13	VA13H28A
25. trans-1,2-Dichloroethene (NN)	U		ppbv	2.6	10	08/28/13	VA13H28A	08/28/13	VA13H28A
26. 1,2-Dichloropropane (NN)	U		ppbv	2.6	10	08/28/13	VA13H28A	08/28/13	VA13H28A
27. cis-1,3-Dichloropropene (NN)	U		ppbv	2.8	10	08/28/13	VA13H28A	08/28/13	VA13H28A
28. trans-1,3-Dichloropropene (NN)	U		ppbv	12	10	08/28/13	VA13H28A	08/28/13	VA13H28A
29. 1,4-Dioxane (NN)	U		ppbv	5.1	10	08/28/13	VA13H28A	08/28/13	VA13H28A
30. Ethyl Acetate (NN)	U		ppbv	27	10	08/28/13	VA13H28A	08/28/13	VA13H28A
31. Ethylbenzene (NN)	U		ppbv	2.6	10	08/28/13	VA13H28A	08/28/13	VA13H28A
32. Ethylene Dibromide (NN)	U		ppbv	2.4	10	08/28/13	VA13H28A	08/28/13	VA13H28A
33. 4-Ethyltoluene (NN)	U		ppbv	2.6	10	08/28/13	VA13H28A	08/28/13	VA13H28A
34. n-Heptane (NN)	U		ppbv	2.7	10	08/28/13	VA13H28A	08/28/13	VA13H28A
35. Hexachlorobutadiene (NN)	U		ppbv	2.6	10	08/28/13	VA13H28A	08/28/13	VA13H28A
36. n-Hexane (NN)	14		ppbv	2.7	10	08/28/13	VA13H28A	08/28/13	VA13H28A
37. 2-Hexanone (NN)	U		ppbv	13	10	08/28/13	VA13H28A	08/28/13	VA13H28A
38. Isopropanol (NN)	U		ppbv	140	10	08/28/13	VA13H28A	08/28/13	VA13H28A
39. Methylene Chloride (NN)	U		ppbv	26	10	08/28/13	VA13H28A	08/28/13	VA13H28A

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Client Identification:	Envirologic Technologies, Inc.	Sample Description:	SG-11	Chain of Custody:	113501
Client Project Name:	JCBRAU(11)	Sample No:	8	Collect Date:	08/23/13
Client Project No:	100218C	Sample Matrix:	Air	Collect Time:	11:04

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) (TO-15)		Aliquot ID: 57601-008					Matrix: Air	Analyst: RDK	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
40. 2-Methylnaphthalene (NN)	U		ppbv	24	10	08/28/13	VA13H28A	08/28/13	VA13H28A
41. 4-Methyl-2-pentanone (NN)	U		ppbv	2.6	10	08/28/13	VA13H28A	08/28/13	VA13H28A
42. MTBE (NN)	U		ppbv	2.6	10	08/28/13	VA13H28A	08/28/13	VA13H28A
43. Naphthalene (NN)	U		ppbv	2.8	10	08/28/13	VA13H28A	08/28/13	VA13H28A
44. Propylene (NN)	950		ppbv	26	10	08/28/13	VA13H28A	08/28/13	VA13H28A
45. Styrene (NN)	U		ppbv	2.6	10	08/28/13	VA13H28A	08/28/13	VA13H28A
46. 1,1,2,2-Tetrachloroethane (NN)	U		ppbv	2.7	10	08/28/13	VA13H28A	08/28/13	VA13H28A
47. Tetrachloroethene (NN)	U		ppbv	2.6	10	08/28/13	VA13H28A	08/28/13	VA13H28A
48. Tetrahydrofuran (NN)	U		ppbv	13	10	08/28/13	VA13H28A	08/28/13	VA13H28A
49. Toluene (NN)	13		ppbv	2.6	10	08/28/13	VA13H28A	08/28/13	VA13H28A
50. 1,2,4-Trichlorobenzene (NN)	U		ppbv	2.5	10	08/28/13	VA13H28A	08/28/13	VA13H28A
51. 1,1,1-Trichloroethane (NN)	U		ppbv	2.6	10	08/28/13	VA13H28A	08/28/13	VA13H28A
52. 1,1,2-Trichloroethane (NN)	U		ppbv	2.7	10	08/28/13	VA13H28A	08/28/13	VA13H28A
53. Trichloroethene (NN)	9.9		ppbv	2.6	10	08/28/13	VA13H28A	08/28/13	VA13H28A
54. Trichlorofluoromethane (NN)	17		ppbv	2.7	10	08/28/13	VA13H28A	08/28/13	VA13H28A
55. 1,1,2-Trichlorotrifluoroethane (NN)	U		ppbv	2.7	10	08/28/13	VA13H28A	08/28/13	VA13H28A
56. 1,2,4-Trimethylbenzene (NN)	U		ppbv	2.6	10	08/28/13	VA13H28A	08/28/13	VA13H28A
57. 1,3,5-Trimethylbenzene (NN)	U		ppbv	2.6	10	08/28/13	VA13H28A	08/28/13	VA13H28A
58. Vinyl Acetate (NN)	U		ppbv	27	10	08/28/13	VA13H28A	08/28/13	VA13H28A
59. Vinyl Chloride (NN)	U		ppbv	14	10	08/28/13	VA13H28A	08/28/13	VA13H28A
60. m&p-Xylene (NN)	U		ppbv	5.7	10	08/28/13	VA13H28A	08/28/13	VA13H28A
61. o-Xylene (NN)	U		ppbv	2.7	10	08/28/13	VA13H28A	08/28/13	VA13H28A
62. Xylenes (NN)	U		ppbv	7.8	10	08/28/13	VA13H28A	08/28/13	VA13H28A

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Client Identification:	Envirologic Technologies, Inc.	Sample Description:	SG-10	Chain of Custody:	113501
Client Project Name:	JCBRAU(11)	Sample No:	9	Collect Date:	08/23/13
Client Project No:	100218C	Sample Matrix:	Air	Collect Time:	10:14

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) (TO-15)		Aliquot ID: 57601-009					Matrix: Air	Analyst: RDK	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone (NN)	48		ppbv	5.6	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
2. Benzene (NN)	0.51		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
3. Benzyl Chloride (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
4. Bromodichloromethane (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
5. Bromoform (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
6. Bromomethane (NN)	U		ppbv	2.5	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
7. 1,3-Butadiene (NN)	U		ppbv	2.6	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
8. 2-Butanone (NN)	U		ppbv	1.1	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
9. Carbon Disulfide (NN)	U		ppbv	2.6	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
10. Carbon Tetrachloride (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
11. Chlorobenzene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
12. Chloroethane (NN)	U		ppbv	2.5	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
13. Chloroform (NN)	U		ppbv	0.33	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
14. Chloromethane (NN)	U		ppbv	2.5	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
15. Cyclohexane (NN)	U		ppbv	2.6	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
16. Dibromochloromethane (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
17. 1,2-Dichlorobenzene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
18. 1,3-Dichlorobenzene (NN)	2.2		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
19. 1,4-Dichlorobenzene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
20. Dichlorodifluoromethane (NN)	U		ppbv	2.5	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
21. 1,1-Dichloroethane (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
22. 1,2-Dichloroethane (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
23. 1,1-Dichloroethene (NN)	U		ppbv	0.36	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
24. cis-1,2-Dichloroethene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
25. trans-1,2-Dichloroethene (NN)	U		ppbv	0.33	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
26. 1,2-Dichloropropane (NN)	U		ppbv	1.1	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
27. cis-1,3-Dichloropropene (NN)	U		ppbv	0.36	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
28. trans-1,3-Dichloropropene (NN)	U		ppbv	1.2	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
29. 1,4-Dioxane (NN)	U		ppbv	0.51	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
30. Ethyl Acetate (NN)	U		ppbv	2.7	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
31. Ethylbenzene (NN)	0.75		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
32. Ethylene Dibromide (NN)	U		ppbv	0.36	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
33. 4-Ethyltoluene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
34. n-Heptane (NN)	0.44		ppbv	0.35	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
35. Hexachlorobutadiene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
36. n-Hexane (NN)	1.2		ppbv	0.33	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
37. 2-Hexanone (NN)	U		ppbv	1.3	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
38. Isopropanol (NN)	19		ppbv	14	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
39. Methylene Chloride (NN)	U		ppbv	8.3	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A

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Client Identification:	Envirologic Technologies, Inc.	Sample Description:	SG-10	Chain of Custody:	113501
Client Project Name:	JCBRAU(11)	Sample No:	9	Collect Date:	08/23/13
Client Project No:	100218C	Sample Matrix:	Air	Collect Time:	10:14

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) (TO-15)		Aliquot ID: 57601-009					Matrix: Air	Analyst: RDK	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
40. 2-Methylnaphthalene (NN)	U		ppbv	2.4	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
41. 4-Methyl-2-pentanone (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
42. MTBE (NN)	U		ppbv	0.35	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
43. Naphthalene (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
44. Propylene (NN)	41		ppbv	2.6	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
45. Styrene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
46. 1,1,2,2-Tetrachloroethane (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
47. Tetrachloroethene (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
48. Tetrahydrofuran (NN)	U		ppbv	1.3	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
49. Toluene (NN)	6.3		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
50. 1,2,4-Trichlorobenzene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
51. 1,1,1-Trichloroethane (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
52. 1,1,2-Trichloroethane (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
53. Trichloroethene (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
54. Trichlorofluoromethane (NN)	2.1		ppbv	0.34	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
55. 1,1,2-Trichlorotrifluoroethane (NN)	U		ppbv	0.36	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
56. 1,2,4-Trimethylbenzene (NN)	1.5		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
57. 1,3,5-Trimethylbenzene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
58. Vinyl Acetate (NN)	U		ppbv	2.7	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
59. Vinyl Chloride (NN)	U		ppbv	1.4	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
60. m&p-Xylene (NN)	2.5		ppbv	0.76	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
61. o-Xylene (NN)	0.99		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
62. Xylenes (NN)	3.5		ppbv	1.1	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A

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Client Identification:	Envirologic Technologies, Inc.	Sample Description:	SG-9	Chain of Custody:	113501
Client Project Name:	JCBRAU(11)	Sample No:	10	Collect Date:	08/23/13
Client Project No:	100218C	Sample Matrix:	Air	Collect Time:	11:24

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) (TO-15)		Aliquot ID: 57601-010					Matrix: Air	Analyst: RDK	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone (NN)	U		ppbv	17	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
2. Benzene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
3. Benzyl Chloride (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
4. Bromodichloromethane (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
5. Bromoform (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
6. Bromomethane (NN)	U		ppbv	2.5	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
7. 1,3-Butadiene (NN)	U		ppbv	2.6	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
8. 2-Butanone (NN)	U		ppbv	1.1	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
9. Carbon Disulfide (NN)	U		ppbv	2.6	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
10. Carbon Tetrachloride (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
11. Chlorobenzene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
12. Chloroethane (NN)	U		ppbv	2.5	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
13. Chloroform (NN)	U		ppbv	0.33	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
14. Chloromethane (NN)	U		ppbv	2.5	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
15. Cyclohexane (NN)	U		ppbv	2.6	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
16. Dibromochloromethane (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
17. 1,2-Dichlorobenzene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
18. 1,3-Dichlorobenzene (NN)	2.5		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
19. 1,4-Dichlorobenzene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
20. Dichlorodifluoromethane (NN)	U		ppbv	2.5	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
21. 1,1-Dichloroethane (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
22. 1,2-Dichloroethane (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
23. 1,1-Dichloroethene (NN)	U		ppbv	0.36	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
24. cis-1,2-Dichloroethene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
25. trans-1,2-Dichloroethene (NN)	U		ppbv	0.33	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
26. 1,2-Dichloropropane (NN)	U		ppbv	1.1	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
27. cis-1,3-Dichloropropene (NN)	U		ppbv	0.36	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
28. trans-1,3-Dichloropropene (NN)	U		ppbv	1.2	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
29. 1,4-Dioxane (NN)	U		ppbv	0.51	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
30. Ethyl Acetate (NN)	U		ppbv	2.7	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
31. Ethylbenzene (NN)	0.79		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
32. Ethylene Dibromide (NN)	U		ppbv	0.36	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
33. 4-Ethyltoluene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
34. n-Heptane (NN)	U		ppbv	0.35	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
35. Hexachlorobutadiene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
36. n-Hexane (NN)	0.46		ppbv	0.33	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
37. 2-Hexanone (NN)	U		ppbv	1.3	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
38. Isopropanol (NN)	U		ppbv	14	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
39. Methylene Chloride (NN)	U		ppbv	2.6	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A

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Client Identification:	Envirologic Technologies, Inc.	Sample Description:	SG-9	Chain of Custody:	113501
Client Project Name:	JCBRAU(11)	Sample No:	10	Collect Date:	08/23/13
Client Project No:	100218C	Sample Matrix:	Air	Collect Time:	11:24

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) (TO-15)		Aliquot ID: 57601-010					Matrix: Air	Analyst: RDK	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
40. 2-Methylnaphthalene (NN)	U		ppbv	2.4	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
41. 4-Methyl-2-pentanone (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
42. MTBE (NN)	U		ppbv	0.35	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
43. Naphthalene (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
44. Propylene (NN)	U		ppbv	2.6	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
45. Styrene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
46. 1,1,2,2-Tetrachloroethane (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
47. Tetrachloroethene (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
48. Tetrahydrofuran (NN)	U		ppbv	1.3	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
49. Toluene (NN)	4.0		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
50. 1,2,4-Trichlorobenzene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
51. 1,1,1-Trichloroethane (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
52. 1,1,2-Trichloroethane (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
53. Trichloroethene (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
54. Trichlorofluoromethane (NN)	U		ppbv	0.34	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
55. 1,1,2-Trichlorotrifluoroethane (NN)	U		ppbv	0.36	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
56. 1,2,4-Trimethylbenzene (NN)	2.1		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
57. 1,3,5-Trimethylbenzene (NN)	0.43		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
58. Vinyl Acetate (NN)	U		ppbv	2.7	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
59. Vinyl Chloride (NN)	U		ppbv	1.4	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
60. m&p-Xylene (NN)	2.8		ppbv	0.76	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
61. o-Xylene (NN)	1.1		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
62. Xylenes (NN)	3.9		ppbv	1.1	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A

Client Identification:	Envirologic Technologies, Inc.	Sample Description:	SG-8	Chain of Custody:	113502
Client Project Name:	JCBRAU(11)	Sample No:	11	Collect Date:	08/23/13
Client Project No:	100218C	Sample Matrix:	Air	Collect Time:	11:35

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) (TO-15)		Aliquot ID: 57601-011					Matrix: Air	Analyst: RDK	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone (NN)	160	E	ppbv	5.6	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
2. Benzene (NN)	1.9		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
3. Benzyl Chloride (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
4. Bromodichloromethane (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
5. Bromoform (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
6. Bromomethane (NN)	U		ppbv	2.5	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
7. 1,3-Butadiene (NN)	U		ppbv	2.6	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
8. 2-Butanone (NN)	5.2		ppbv	1.1	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
9. Carbon Disulfide (NN)	42		ppbv	2.6	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
10. Carbon Tetrachloride (NN)	40		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
11. Chlorobenzene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
12. Chloroethane (NN)	U		ppbv	2.5	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
13. Chloroform (NN)	9.9		ppbv	0.33	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
14. Chloromethane (NN)	U		ppbv	2.5	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
15. Cyclohexane (NN)	5.9		ppbv	2.6	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
16. Dibromochloromethane (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
17. 1,2-Dichlorobenzene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
18. 1,3-Dichlorobenzene (NN)	4.3		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
19. 1,4-Dichlorobenzene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
20. Dichlorodifluoromethane (NN)	U		ppbv	2.5	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
21. 1,1-Dichloroethane (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
22. 1,2-Dichloroethane (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
23. 1,1-Dichloroethene (NN)	U		ppbv	0.36	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
24. cis-1,2-Dichloroethene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
25. trans-1,2-Dichloroethene (NN)	U		ppbv	0.33	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
26. 1,2-Dichloropropane (NN)	U		ppbv	1.1	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
27. cis-1,3-Dichloropropene (NN)	U		ppbv	0.36	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
28. trans-1,3-Dichloropropene (NN)	U		ppbv	1.2	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
29. 1,4-Dioxane (NN)	U		ppbv	0.51	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
30. Ethyl Acetate (NN)	4.4		ppbv	2.7	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
31. Ethylbenzene (NN)	1.6		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
32. Ethylene Dibromide (NN)	U		ppbv	0.36	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
33. 4-Ethyltoluene (NN)	0.48		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
34. n-Heptane (NN)	2.1		ppbv	0.35	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
35. Hexachlorobutadiene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
36. n-Hexane (NN)	5.1		ppbv	0.33	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
37. 2-Hexanone (NN)	U		ppbv	1.3	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
38. Isopropanol (NN)	43		ppbv	14	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
39. Methylene Chloride (NN)	U		ppbv	2.6	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A

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Client Identification:	Envirologic Technologies, Inc.	Sample Description:	SG-8	Chain of Custody:	113502
Client Project Name:	JCBRAU(11)	Sample No:	11	Collect Date:	08/23/13
Client Project No:	100218C	Sample Matrix:	Air	Collect Time:	11:35

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) (TO-15)		Aliquot ID: 57601-011					Matrix: Air	Analyst: RDK	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
40. 2-Methylnaphthalene (NN)	U		ppbv	2.4	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
41. 4-Methyl-2-pentanone (NN)	0.64		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
42. MTBE (NN)	U		ppbv	0.35	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
43. Naphthalene (NN)	0.58		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
44. Propylene (NN)	22		ppbv	2.6	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
45. Styrene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
46. 1,1,2,2-Tetrachloroethane (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
47. Tetrachloroethene (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
48. Tetrahydrofuran (NN)	2.2		ppbv	1.3	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
49. Toluene (NN)	15		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
50. 1,2,4-Trichlorobenzene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
51. 1,1,1-Trichloroethane (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
52. 1,1,2-Trichloroethane (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
53. Trichloroethene (NN)	3.8		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
54. Trichlorofluoromethane (NN)	9.6		ppbv	0.34	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
55. 1,1,2-Trichlorotrifluoroethane (NN)	U		ppbv	0.36	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
56. 1,2,4-Trimethylbenzene (NN)	2.7		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
57. 1,3,5-Trimethylbenzene (NN)	0.57		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
58. Vinyl Acetate (NN)	U		ppbv	2.7	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
59. Vinyl Chloride (NN)	U		ppbv	1.4	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
60. m&p-Xylene (NN)	5.1		ppbv	0.76	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
61. o-Xylene (NN)	2.1		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
62. Xylenes (NN)	7.2		ppbv	1.1	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A

Client Identification:	Envirologic Technologies, Inc.	Sample Description:	SG-6	Chain of Custody:	113502
Client Project Name:	JCBRAU(11)	Sample No:	12	Collect Date:	08/23/13
Client Project No:	100218C	Sample Matrix:	Air	Collect Time:	11:55

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) (TO-15)		Aliquot ID: 57601-012					Matrix: Air	Analyst: RDK	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone (NN)	170		ppbv	28	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
2. Benzene (NN)	U		ppbv	1.8	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
3. Benzyl Chloride (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
4. Bromodichloromethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
5. Bromoform (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
6. Bromomethane (NN)	U		ppbv	12	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
7. 1,3-Butadiene (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
8. 2-Butanone (NN)	U		ppbv	4.9	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
9. Carbon Disulfide (NN)	40		ppbv	13	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
10. Carbon Tetrachloride (NN)	14		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
11. Chlorobenzene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
12. Chloroethane (NN)	U		ppbv	12	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
13. Chloroform (NN)	22		ppbv	1.4	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
14. Chloromethane (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
15. Cyclohexane (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
16. Dibromochloromethane (NN)	U		ppbv	1.4	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
17. 1,2-Dichlorobenzene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
18. 1,3-Dichlorobenzene (NN)	6.3		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
19. 1,4-Dichlorobenzene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
20. Dichlorodifluoromethane (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
21. 1,1-Dichloroethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
22. 1,2-Dichloroethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
23. 1,1-Dichloroethene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
24. cis-1,2-Dichloroethene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
25. trans-1,2-Dichloroethene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
26. 1,2-Dichloropropane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
27. cis-1,3-Dichloropropene (NN)	U		ppbv	1.4	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
28. trans-1,3-Dichloropropene (NN)	U		ppbv	6.0	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
29. 1,4-Dioxane (NN)	U		ppbv	2.6	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
30. Ethyl Acetate (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
31. Ethylbenzene (NN)	U		ppbv	1.6	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
32. Ethylene Dibromide (NN)	U		ppbv	1.2	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
33. 4-Ethyltoluene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
34. n-Heptane (NN)	2.0		ppbv	1.4	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
35. Hexachlorobutadiene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
36. n-Hexane (NN)	4.7		ppbv	1.4	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
37. 2-Hexanone (NN)	U		ppbv	6.6	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
38. Isopropanol (NN)	U		ppbv	70	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
39. Methylene Chloride (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A

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Client Identification:	Envirologic Technologies, Inc.	Sample Description:	SG-6	Chain of Custody:	113502
Client Project Name:	JCBRAU(11)	Sample No:	12	Collect Date:	08/23/13
Client Project No:	100218C	Sample Matrix:	Air	Collect Time:	11:55

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) (TO-15)		Aliquot ID: 57601-012				Matrix: Air	Analyst: RDK		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
40. 2-Methylnaphthalene (NN)	U		ppbv	12	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
41. 4-Methyl-2-pentanone (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
42. MTBE (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
43. Naphthalene (NN)	U		ppbv	1.4	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
44. Propylene (NN)	30		ppbv	13	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
45. Styrene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
46. 1,1,2,2-Tetrachloroethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
47. Tetrachloroethene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
48. Tetrahydrofuran (NN)	U		ppbv	6.7	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
49. Toluene (NN)	14		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
50. 1,2,4-Trichlorobenzene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
51. 1,1,1-Trichloroethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
52. 1,1,2-Trichloroethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
53. Trichloroethene (NN)	2.2		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
54. Trichlorofluoromethane (NN)	31		ppbv	1.4	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
55. 1,1,2-Trichlorotrifluoroethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
56. 1,2,4-Trimethylbenzene (NN)	2.4		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
57. 1,3,5-Trimethylbenzene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
58. Vinyl Acetate (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
59. Vinyl Chloride (NN)	U		ppbv	6.9	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
60. m&p-Xylene (NN)	4.4		ppbv	2.6	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
61. o-Xylene (NN)	1.7		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
62. Xylenes (NN)	6.1		ppbv	3.9	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A

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Client Identification:	Envirologic Technologies, Inc.	Sample Description:	SG-5	Chain of Custody:	113502
Client Project Name:	JCBRAU(11)	Sample No:	13	Collect Date:	08/23/13
Client Project No:	100218C	Sample Matrix:	Air	Collect Time:	12:11

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) (TO-15)		Aliquot ID: 57601-013					Matrix: Air	Analyst: RDK	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone (NN)	74		ppbv	5.6	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
2. Benzene (NN)	1.5		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
3. Benzyl Chloride (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
4. Bromodichloromethane (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
5. Bromoform (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
6. Bromomethane (NN)	U		ppbv	2.5	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
7. 1,3-Butadiene (NN)	U		ppbv	2.6	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
8. 2-Butanone (NN)	2.9		ppbv	1.1	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
9. Carbon Disulfide (NN)	23		ppbv	2.6	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
10. Carbon Tetrachloride (NN)	4.2		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
11. Chlorobenzene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
12. Chloroethane (NN)	U		ppbv	2.5	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
13. Chloroform (NN)	2.9		ppbv	0.33	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
14. Chloromethane (NN)	5.3		ppbv	2.5	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
15. Cyclohexane (NN)	3.4		ppbv	2.6	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
16. Dibromochloromethane (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
17. 1,2-Dichlorobenzene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
18. 1,3-Dichlorobenzene (NN)	7.2		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
19. 1,4-Dichlorobenzene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
20. Dichlorodifluoromethane (NN)	U		ppbv	2.5	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
21. 1,1-Dichloroethane (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
22. 1,2-Dichloroethane (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
23. 1,1-Dichloroethene (NN)	U		ppbv	0.36	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
24. cis-1,2-Dichloroethene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
25. trans-1,2-Dichloroethene (NN)	U		ppbv	0.33	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
26. 1,2-Dichloropropane (NN)	U		ppbv	1.1	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
27. cis-1,3-Dichloropropene (NN)	U		ppbv	0.36	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
28. trans-1,3-Dichloropropene (NN)	U		ppbv	1.2	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
29. 1,4-Dioxane (NN)	U		ppbv	0.51	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
30. Ethyl Acetate (NN)	5.1		ppbv	2.7	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
31. Ethylbenzene (NN)	1.4		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
32. Ethylene Dibromide (NN)	U		ppbv	0.36	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
33. 4-Ethyltoluene (NN)	0.44		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
34. n-Heptane (NN)	0.95		ppbv	0.35	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
35. Hexachlorobutadiene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
36. n-Hexane (NN)	2.4		ppbv	0.33	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
37. 2-Hexanone (NN)	U		ppbv	1.3	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
38. Isopropanol (NN)	42		ppbv	14	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
39. Methylene Chloride (NN)	U		ppbv	2.6	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A

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Client Identification:	Envirologic Technologies, Inc.	Sample Description:	SG-5	Chain of Custody:	113502
Client Project Name:	JCBRAU(11)	Sample No:	13	Collect Date:	08/23/13
Client Project No:	100218C	Sample Matrix:	Air	Collect Time:	12:11

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) (TO-15)		Aliquot ID: 57601-013					Matrix: Air	Analyst: RDK	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
40. 2-Methylnaphthalene (NN)	U		ppbv	2.4	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
41. 4-Methyl-2-pentanone (NN)	0.72		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
42. MTBE (NN)	U		ppbv	0.35	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
43. Naphthalene (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
44. Propylene (NN)	66		ppbv	2.6	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
45. Styrene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
46. 1,1,2,2-Tetrachloroethane (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
47. Tetrachloroethene (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
48. Tetrahydrofuran (NN)	1.6		ppbv	1.3	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
49. Toluene (NN)	9.7		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
50. 1,2,4-Trichlorobenzene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
51. 1,1,1-Trichloroethane (NN)	0.55		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
52. 1,1,2-Trichloroethane (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
53. Trichloroethene (NN)	9.8		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
54. Trichlorofluoromethane (NN)	14		ppbv	0.34	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
55. 1,1,2-Trichlorotrifluoroethane (NN)	U		ppbv	0.36	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
56. 1,2,4-Trimethylbenzene (NN)	2.2		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
57. 1,3,5-Trimethylbenzene (NN)	0.47		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
58. Vinyl Acetate (NN)	U		ppbv	2.7	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
59. Vinyl Chloride (NN)	U		ppbv	1.4	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
60. m&p-Xylene (NN)	4.2		ppbv	0.76	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
61. o-Xylene (NN)	1.7		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
62. Xylenes (NN)	5.9		ppbv	1.1	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A

Client Identification:	Envirologic Technologies, Inc.	Sample Description:	SG-3	Chain of Custody:	113502
Client Project Name:	JCBRAU(11)	Sample No:	14	Collect Date:	08/23/13
Client Project No:	100218C	Sample Matrix:	Air	Collect Time:	12:19

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) (TO-15)		Aliquot ID: 57601-014					Matrix: Air	Analyst: RDK	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone (NN)	200		ppbv	28	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
2. Benzene (NN)	U		ppbv	1.4	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
3. Benzyl Chloride (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
4. Bromodichloromethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
5. Bromoform (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
6. Bromomethane (NN)	U		ppbv	12	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
7. 1,3-Butadiene (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
8. 2-Butanone (NN)	U		ppbv	5.2	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
9. Carbon Disulfide (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
10. Carbon Tetrachloride (NN)	85		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
11. Chlorobenzene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
12. Chloroethane (NN)	U		ppbv	12	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
13. Chloroform (NN)	10		ppbv	1.4	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
14. Chloromethane (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
15. Cyclohexane (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
16. Dibromochloromethane (NN)	U		ppbv	1.4	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
17. 1,2-Dichlorobenzene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
18. 1,3-Dichlorobenzene (NN)	4.7		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
19. 1,4-Dichlorobenzene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
20. Dichlorodifluoromethane (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
21. 1,1-Dichloroethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
22. 1,2-Dichloroethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
23. 1,1-Dichloroethene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
24. cis-1,2-Dichloroethene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
25. trans-1,2-Dichloroethene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
26. 1,2-Dichloropropane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
27. cis-1,3-Dichloropropene (NN)	U		ppbv	1.4	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
28. trans-1,3-Dichloropropene (NN)	U		ppbv	6.0	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
29. 1,4-Dioxane (NN)	U		ppbv	2.6	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
30. Ethyl Acetate (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
31. Ethylbenzene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
32. Ethylene Dibromide (NN)	U		ppbv	1.2	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
33. 4-Ethyltoluene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
34. n-Heptane (NN)	U		ppbv	1.4	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
35. Hexachlorobutadiene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
36. n-Hexane (NN)	U		ppbv	1.8	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
37. 2-Hexanone (NN)	U		ppbv	6.6	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
38. Isopropanol (NN)	U		ppbv	70	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
39. Methylene Chloride (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A

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Client Identification:	Envirologic Technologies, Inc.	Sample Description:	SG-3	Chain of Custody:	113502
Client Project Name:	JCBRAU(11)	Sample No:	14	Collect Date:	08/23/13
Client Project No:	100218C	Sample Matrix:	Air	Collect Time:	12:19

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) (TO-15)		Aliquot ID: 57601-014					Matrix: Air	Analyst: RDK	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
40. 2-Methylnaphthalene (NN)	U		ppbv	12	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
41. 4-Methyl-2-pentanone (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
42. MTBE (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
43. Naphthalene (NN)	U		ppbv	1.4	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
44. Propylene (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
45. Styrene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
46. 1,1,2,2-Tetrachloroethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
47. Tetrachloroethene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
48. Tetrahydrofuran (NN)	U		ppbv	6.7	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
49. Toluene (NN)	8.4		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
50. 1,2,4-Trichlorobenzene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
51. 1,1,1-Trichloroethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
52. 1,1,2-Trichloroethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
53. Trichloroethene (NN)	7.9		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
54. Trichlorofluoromethane (NN)	5.8		ppbv	1.4	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
55. 1,1,2-Trichlorotrifluoroethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
56. 1,2,4-Trimethylbenzene (NN)	2.2		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
57. 1,3,5-Trimethylbenzene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
58. Vinyl Acetate (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
59. Vinyl Chloride (NN)	U		ppbv	6.9	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
60. m&p-Xylene (NN)	U		ppbv	3.4	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
61. o-Xylene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
62. Xylenes (NN)	U		ppbv	3.9	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A

Client Identification:	Envirologic Technologies, Inc.	Sample Description:	SG-2	Chain of Custody:	113502
Client Project Name:	JCBRAU(11)	Sample No:	15	Collect Date:	08/23/13
Client Project No:	100218C	Sample Matrix:	Air	Collect Time:	12:45

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) (TO-15)		Aliquot ID: 57601-015					Matrix: Air	Analyst: RDK	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone (NN)	25		ppbv	5.6	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
2. Benzene (NN)	0.41		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
3. Benzyl Chloride (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
4. Bromodichloromethane (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
5. Bromoform (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
6. Bromomethane (NN)	U		ppbv	2.5	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
7. 1,3-Butadiene (NN)	U		ppbv	2.6	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
8. 2-Butanone (NN)	U		ppbv	1.1	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
9. Carbon Disulfide (NN)	U		ppbv	2.6	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
10. Carbon Tetrachloride (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
11. Chlorobenzene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
12. Chloroethane (NN)	U		ppbv	2.5	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
13. Chloroform (NN)	U		ppbv	0.33	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
14. Chloromethane (NN)	U		ppbv	2.5	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
15. Cyclohexane (NN)	U		ppbv	2.6	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
16. Dibromochloromethane (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
17. 1,2-Dichlorobenzene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
18. 1,3-Dichlorobenzene (NN)	5.1		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
19. 1,4-Dichlorobenzene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
20. Dichlorodifluoromethane (NN)	U		ppbv	2.5	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
21. 1,1-Dichloroethane (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
22. 1,2-Dichloroethane (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
23. 1,1-Dichloroethene (NN)	U		ppbv	0.36	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
24. cis-1,2-Dichloroethene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
25. trans-1,2-Dichloroethene (NN)	U		ppbv	0.33	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
26. 1,2-Dichloropropane (NN)	U		ppbv	1.1	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
27. cis-1,3-Dichloropropene (NN)	U		ppbv	0.36	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
28. trans-1,3-Dichloropropene (NN)	U		ppbv	1.2	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
29. 1,4-Dioxane (NN)	U		ppbv	0.51	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
30. Ethyl Acetate (NN)	U		ppbv	2.7	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
31. Ethylbenzene (NN)	0.68		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
32. Ethylene Dibromide (NN)	U		ppbv	0.36	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
33. 4-Ethyltoluene (NN)	0.45		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
34. n-Heptane (NN)	U		ppbv	0.35	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
35. Hexachlorobutadiene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
36. n-Hexane (NN)	0.45		ppbv	0.33	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
37. 2-Hexanone (NN)	U		ppbv	1.3	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
38. Isopropanol (NN)	U		ppbv	14	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
39. Methylene Chloride (NN)	U		ppbv	2.6	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A

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Client Identification:	Envirologic Technologies, Inc.	Sample Description:	SG-2	Chain of Custody:	113502
Client Project Name:	JCBRAU(11)	Sample No:	15	Collect Date:	08/23/13
Client Project No:	100218C	Sample Matrix:	Air	Collect Time:	12:45

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) (TO-15)		Aliquot ID: 57601-015					Matrix: Air	Analyst: RDK	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
40. 2-Methylnaphthalene (NN)	U		ppbv	2.4	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
41. 4-Methyl-2-pentanone (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
42. MTBE (NN)	U		ppbv	0.35	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
43. Naphthalene (NN)	0.46		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
44. Propylene (NN)	11		ppbv	2.6	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
45. Styrene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
46. 1,1,2,2-Tetrachloroethane (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
47. Tetrachloroethene (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
48. Tetrahydrofuran (NN)	U		ppbv	1.3	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
49. Toluene (NN)	2.8		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
50. 1,2,4-Trichlorobenzene (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
51. 1,1,1-Trichloroethane (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
52. 1,1,2-Trichloroethane (NN)	U		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
53. Trichloroethene (NN)	U		ppbv	0.37	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
54. Trichlorofluoromethane (NN)	U		ppbv	0.34	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
55. 1,1,2-Trichlorotrifluoroethane (NN)	U		ppbv	0.36	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
56. 1,2,4-Trimethylbenzene (NN)	2.4		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
57. 1,3,5-Trimethylbenzene (NN)	0.55		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
58. Vinyl Acetate (NN)	U		ppbv	2.7	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
59. Vinyl Chloride (NN)	U		ppbv	1.4	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
60. m&p-Xylene (NN)	2.3		ppbv	0.76	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
61. o-Xylene (NN)	1.1		ppbv	0.38	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A
62. Xylenes (NN)	3.3		ppbv	1.1	1.0	08/28/13	VA13H28A	08/29/13	VA13H28A

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Client Identification:	Envirologic Technologies, Inc.	Sample Description:	M-1A	Chain of Custody:	113502
Client Project Name:	JCBRAU(11)	Sample No:	16	Collect Date:	08/23/13
Client Project No:	100218C	Sample Matrix:	Air	Collect Time:	NA

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) (TO-15)		Aliquot ID: 57601-016					Matrix: Air	Analyst: RDK	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone (NN)	78		ppbv	28	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
2. Benzene (NN)	U		ppbv	1.9	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
3. Benzyl Chloride (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
4. Bromodichloromethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
5. Bromoform (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
6. Bromomethane (NN)	U		ppbv	12	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
7. 1,3-Butadiene (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
8. 2-Butanone (NN)	U		ppbv	3.1	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
9. Carbon Disulfide (NN)	110		ppbv	13	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
10. Carbon Tetrachloride (NN)	180		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
11. Chlorobenzene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
12. Chloroethane (NN)	U		ppbv	12	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
13. Chloroform (NN)	120		ppbv	1.4	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
14. Chloromethane (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
15. Cyclohexane (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
16. Dibromochloromethane (NN)	U		ppbv	1.4	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
17. 1,2-Dichlorobenzene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
18. 1,3-Dichlorobenzene (NN)	2.7		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
19. 1,4-Dichlorobenzene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
20. Dichlorodifluoromethane (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
21. 1,1-Dichloroethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
22. 1,2-Dichloroethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
23. 1,1-Dichloroethene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
24. cis-1,2-Dichloroethene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
25. trans-1,2-Dichloroethene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
26. 1,2-Dichloropropane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
27. cis-1,3-Dichloropropene (NN)	U		ppbv	1.4	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
28. trans-1,3-Dichloropropene (NN)	U		ppbv	6.0	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
29. 1,4-Dioxane (NN)	U		ppbv	2.6	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
30. Ethyl Acetate (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
31. Ethylbenzene (NN)	U		ppbv	1.5	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
32. Ethylene Dibromide (NN)	U		ppbv	1.2	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
33. 4-Ethyltoluene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
34. n-Heptane (NN)	4.0		ppbv	1.4	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
35. Hexachlorobutadiene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
36. n-Hexane (NN)	9.5		ppbv	1.4	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
37. 2-Hexanone (NN)	U		ppbv	6.6	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
38. Isopropanol (NN)	U		ppbv	70	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
39. Methylene Chloride (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A

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Client Identification:	Envirologic Technologies, Inc.	Sample Description:	M-1A	Chain of Custody:	113502
Client Project Name:	JCBRAU(11)	Sample No:	16	Collect Date:	08/23/13
Client Project No:	100218C	Sample Matrix:	Air	Collect Time:	NA

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

TO-15 (Bottle-Vac) (TO-15)		Aliquot ID: 57601-016					Matrix: Air	Analyst: RDK	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
40. 2-Methylnaphthalene (NN)	U		ppbv	12	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
41. 4-Methyl-2-pentanone (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
42. MTBE (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
43. Naphthalene (NN)	U		ppbv	1.4	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
44. Propylene (NN)	110		ppbv	13	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
45. Styrene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
46. 1,1,2,2-Tetrachloroethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
47. Tetrachloroethene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
48. Tetrahydrofuran (NN)	U		ppbv	6.7	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
49. Toluene (NN)	15		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
50. 1,2,4-Trichlorobenzene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
51. 1,1,1-Trichloroethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
52. 1,1,2-Trichloroethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
53. Trichloroethene (NN)	3.6		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
54. Trichlorofluoromethane (NN)	U		ppbv	1.4	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
55. 1,1,2-Trichlorotrifluoroethane (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
56. 1,2,4-Trimethylbenzene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
57. 1,3,5-Trimethylbenzene (NN)	U		ppbv	1.3	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
58. Vinyl Acetate (NN)	U		ppbv	13	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
59. Vinyl Chloride (NN)	U		ppbv	6.9	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
60. m&p-Xylene (NN)	U		ppbv	3.5	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
61. o-Xylene (NN)	U		ppbv	1.4	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A
62. Xylenes (NN)	U		ppbv	4.9	5.0	08/28/13	VA13H28A	08/29/13	VA13H28A

Definitions/ Qualifiers:

- A: Spike recovery or precision unusable due to dilution.
- B: The analyte was detected in the associated method blank.
- E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
- J: The concentration is an estimated value.
- M: Modified Method
- U: The analyte was not detected at or above the reporting limit.
- X: Matrix Interference has resulted in a raised reporting limit or distorted result.
- W: Results reported on a wet-weight basis.
- *: Value reported is outside QA limits

Exception Summary:

Accreditation Number:

E-10395

Quality Control Report
Preparation Batch QC Summary
Volatile Organics by GC/MS

Batch ID: V413I03A
Page: 1 of 2
Date: 09/04/13

OH
09-04-13

Air

Preparation Batch: V413I03A Preparation Date: 09/03/13

Parameter	Method Blank (MB)			Laboratory Control Sample (LCS)					LCS Duplicate (LCD)			Run Code			
	Result ppbv	PQL ppbv	Q	Result ppbv	Spike ppbv	Rec. %	LCL - UCL %	Q	Rec. %	RPD	UCL %	Q	MB	LCS	LCD
Parameter	Method Blank (MB)			Laboratory Control Sample (LCS)					LCS Duplicate (LCD)			Run Code			
Parameter	Result ppbv	PQL ppbv	Q	Result ppbv	Spike ppbv	Rec. %	LCL - UCL %	Q	Rec. %	RPD	UCL %	Q	MB	LCS	LCD
1. Acetone	U	2.80		27.8	25.9	107	79 - 133		115	7	20		MB-1	LCS-1	LCD-1
2. Benzene	U	0.520		24.8	24.8	100	64 - 119		100	0	20		MB-1	LCS-1	LCD-1
3. Benzyl Chloride	U	0.250		24.2	22.1	109	65 - 143		112	3	20		MB-1	LCS-1	LCD-1
4. Bromodichloromethane	U	0.260		27.0	24.4	111	75 - 122		110	1	20		MB-1	LCS-1	LCD-1
5. Bromoform	U	0.250		26.7	24.3	110	85 - 133		115	4	20		MB-1	LCS-1	LCD-1
6. Bromomethane	U	0.500		25.1	23.9	105	84 - 138		105	0	20		MB-1	LCS-1	LCD-1
7. 1,3-Butadiene	U	2.58		25.5	25.2	101	61 - 112		105	4	20		MB-1	LCS-1	LCD-1
8. 2-Butanone	U	2.65		27.5	26.4	104	71 - 119		110	6	20		MB-1	LCS-1	LCD-1
9. Carbon Disulfide	U	2.63		25.3	25.5	99	59 - 108		101	2	20		MB-1	LCS-1	LCD-1
10. Carbon Tetrachloride	U	0.260		28.4	25.2	113	74 - 118		112	1	20		MB-1	LCS-1	LCD-1
11. Chlorobenzene	U	0.260		25.4	25.4	100	73 - 115		102	2	20		MB-1	LCS-1	LCD-1
12. Chloroethane	U	2.48		25.2	24.0	105	74 - 126		111	6	20		MB-1	LCS-1	LCD-1
13. Chloroform	U	0.530		28.0	25.5	110	71 - 118		109	1	20		MB-1	LCS-1	LCD-1
14. Chloromethane	U	2.53		22.4	24.6	91	62 - 108		101	10	20		MB-1	LCS-1	LCD-1
15. Cyclohexane	U	2.60		26.2	25.3	103	69 - 119		103	0	20		MB-1	LCS-1	LCD-1
16. Dibromochloromethane	U	0.280		31.4	27.0	117	77 - 130		119	2	20		MB-1	LCS-1	LCD-1
17. 1,2-Dichlorobenzene	U	0.260		26.8	24.3	110	67 - 134		115	4	20		MB-1	LCS-1	LCD-1
18. 1,3-Dichlorobenzene	U	0.250		26.1	23.4	112	62 - 136		112	0	20		MB-1	LCS-1	LCD-1
19. 1,4-Dichlorobenzene	U	0.260		25.7	24.3	106	64 - 129		106	0	20		MB-1	LCS-1	LCD-1
20. Dichlorodifluoromethane	U	0.510		26.0	24.2	108	64 - 112		109	1	20		MB-1	LCS-1	LCD-1
21. 1,1-Dichloroethane	U	2.60		25.7	25.3	102	69 - 122		109	7	20		MB-1	LCS-1	LCD-1
22. 1,2-Dichloroethane	U	0.260		27.5	24.8	111	71 - 117		113	2	20		MB-1	LCS-1	LCD-1
23. 1,1-Dichloroethylene	U	0.260		26.3	25.6	103	64 - 129		106	3	20		MB-1	LCS-1	LCD-1
24. cis-1,2-Dichloroethylene	U	0.530		25.9	25.6	101	72 - 123		104	3	20		MB-1	LCS-1	LCD-1
25. trans-1,2-Dichloroethylene	U	2.60		26.9	25.1	107	71 - 126		106	1	20		MB-1	LCS-1	LCD-1
26. 1,2-Dichloropropane	U	2.58		24.5	24.8	99	65 - 125		98	1	20		MB-1	LCS-1	LCD-1
27. cis-1,3-Dichloropropene	U	0.550		29.3	26.0	113	77 - 136		112	1	20		MB-1	LCS-1	LCD-1
28. trans-1,3-Dichloropropene	U	0.480		25.2	22.9	110	67 - 127		114	4	20		MB-1	LCS-1	LCD-1
29. 1,4-Dioxane	U	2.55		24.3	24.6	99	68 - 131		104	5	20		MB-1	LCS-1	LCD-1
30. Ethyl Acetate	U	2.65		26.5	25.6	103	66 - 127		101	2	20		MB-1	LCS-1	LCD-1
31. Ethylbenzene	U	0.260		25.8	25.2	102	73 - 129		106	4	20		MB-1	LCS-1	LCD-1
32. Ethylene Dibromide	U	0.240		26.3	22.8	115	71 - 132		112	3	20		MB-1	LCS-1	LCD-1
33. 4-Ethyltoluene	U	0.260		27.6	24.5	113	78 - 123		116	3	20		MB-1	LCS-1	LCD-1
34. n-Heptane	U	2.65		25.4	25.6	99	57 - 143		104	5	20		MB-1	LCS-1	LCD-1
35. Hexachlorobutadiene	U	0.250		24.9	23.7	105	48 - 158		108	3	20		MB-1	LCS-1	LCD-1
36. n-Hexane	U	0.530		26.0	25.9	100	63 - 131		102	2	20		MB-1	LCS-1	LCD-1
37. 2-Hexanone	U	2.65		26.8	25.5	105	71 - 142		103	2	20		MB-1	LCS-1	LCD-1
38. Isopropanol	U	2.80		24.0	26.7	90	59 - 129		93	3	20		MB-1	LCS-1	LCD-1
39. Methylene Chloride	U	2.60		25.6	25.2	102	70 - 127		103	1	20		MB-1	LCS-1	LCD-1
40. 2-Methylnaphthalene	U	2.43		16.8	22.7	74	70 - 130		79	7	20		MB-1	LCS-1	LCD-1
41. 4-Methyl-2-pentanone	U	2.55		24.0	24.6	98	75 - 139		106	8	20		MB-1	LCS-1	LCD-1
42. MTBE	U	0.530		26.6	25.7	104	73 - 135		106	2	20		MB-1	LCS-1	LCD-1
43. Naphthalene	U	0.280		25.0	25.6	98	70 - 130		102	4	20		MB-1	LCS-1	LCD-1
44. Propylene	U	2.58		24.2	24.7	98	59 - 112		98	0	20		MB-1	LCS-1	LCD-1
45. Styrene	U	0.260		27.9	24.9	112	85 - 134		115	3	20		MB-1	LCS-1	LCD-1
46. 1,1,2,2-Tetrachloroethane	U	0.530		24.5	25.0	98	79 - 132		101	3	20		MB-1	LCS-1	LCD-1
47. Tetrachloroethylene	U	0.260		27.7	24.5	113	70 - 129		113	0	20		MB-1	LCS-1	LCD-1
48. Tetrahydrofuran	U	2.68		27.0	26.0	104	66 - 115		102	2	20		MB-1	LCS-1	LCD-1
49. Toluene	U	0.260		26.5	25.1	106	62 - 128		109	3	20		MB-1	LCS-1	LCD-1

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RSN: V413I03A-130904104942

Quality Control Report
Preparation Batch QC Summary
Volatile Organics by GC/MS
Air

Batch ID: V413I03A
Page: 2 of 2
Date: 09/04/13

Preparation Batch: V413I03A Preparation Date: 09/03/13

Parameter	Method Blank (MB)			Laboratory Control Sample (LCS)					LCS Duplicate (LCD)			Run Code				
	Result ppbv	PQL ppbv	Q	Result ppbv	Spike ppbv	Rec. %	LCL - UCL % %	Q	Rec. %	RPD %	UCL %	Q	MB	LCS	LCD	
Parameter	Method Blank (MB)			Laboratory Control Sample (LCS)					LCS Duplicate (LCD)			Run Code				
	Result ppbv	PQL ppbv	Q	Result ppbv	Spike ppbv	Rec. %	LCL - UCL % %	Q	Rec. %	RPD %	UCL %	Q	MB	LCS	LCD	
50. 1,2,4-Trichlorobenzene	U	0.250		25.1	23.5	107	48 - 156		112	5	20		MB-1	LCS-1	LCD-1	
51. 1,1,1-Trichloroethane	U	0.260		27.3	24.8	110	73 - 118		111	1	20		MB-1	LCS-1	LCD-1	
52. 1,1,2-Trichloroethane	U	0.260		26.7	24.8	108	69 - 123		110	2	20		MB-1	LCS-1	LCD-1	
53. Trichloroethene	U	0.260		27.2	24.5	111	68 - 121		111	0	20		MB-1	LCS-1	LCD-1	
54. Trichlorofluoromethane	U	0.270		27.7	24.6	113	71 - 114		112	1	20		MB-1	LCS-1	LCD-1	
55. 1,1,2-Trichlorotrifluoroethane	U	0.260		26.8	25.2	108	71 - 117		106	0	20		MB-1	LCS-1	LCD-1	
56. 1,2,4-Trimethylbenzene	U	0.260		26.9	24.3	111	78 - 133		114	3	20		MB-1	LCS-1	LCD-1	
57. 1,3,5-Trimethylbenzene	U	0.260		26.3	24.6	107	67 - 126		111	4	20		MB-1	LCS-1	LCD-1	
58. Vinyl Acetate	U	2.68		31.0	26.2	118	80 - 142		124	5	20		MB-1	LCS-1	LCD-1	
59. Vinyl Chloride	U	0.510		25.1	24.4	103	64 - 128		114	10	20		MB-1	LCS-1	LCD-1	
60. m&p-Xylene	U	0.510		50.8	48.7	104	73 - 126		108	4	20		MB-1	LCS-1	LCD-1	
61. o-Xylene	U	0.260		26.8	25.3	106	76 - 127		111	5	20		MB-1	LCS-1	LCD-1	
System Monitoring Compounds (Surrogates):	Method Blank (MB)			Laboratory Control Sample (LCS)					LCS Duplicate (LCD)			Run Code				
	Result ppbv	Spike ppbv	Rec. %	Q	Result ppbv	Spike ppbv	Rec. %	LCL - UCL % %	Q	Rec. %	RPD %	UCL %	Q	MB	LCS	LCD
1. 1,4-Difluorobenzene(S)	28.7	26.3	109		27.4	26.3	104	70 - 130		101	3	20		MB-1	LCS-1	LCD-1
2. 4-Bromofluorobenzene(S)	24.2	26.3	92		25.8	26.3	98	70 - 130		101	3	20		MB-1	LCS-1	LCD-1

Definitions/ Qualifiers:

U: The analyte was not detected at or above the PQL.
*: Value reported is outside QC limits

Run Code (Analysis Sequence/Run Time):

MB-1	V413I03A	09/03/13 15:29
LCS-1	V413I03A	09/03/13 13:10
LCD-1	V413I03A	09/03/13 13:55

Exception Summary:

Exceptions have been properly noted on reported results or affected samples have been scheduled for reanalysis when appropriate.

Report Generated By:

Daniel Robey
Chemist, Volatile Organics
Wednesday, September 04, 2013
10:49:43 AM

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Quality Control Report
Preparation Batch QC Summary
Volatile Organics by GC/MS
Air

Batch ID: V413I04A
Page: 1 of 2
Date: 09/04/13

Preparation Batch: V413I04A Preparation Date: 09/04/13

Parameter	Method Blank (MB)			Laboratory Control Sample (LCS)					LCS Duplicate (LCD)			Run Code		
	Result ppbv	PQL ppbv	Q	Result ppbv	Spike ppbv	Rec. %	LCL - UCL % Q	Rec. %	RPD %	UCL % Q	MB	LCS	LCD	
Parameter	Method Blank (MB)			Laboratory Control Sample (LCS)					LCS Duplicate (LCD)			Run Code		
	Result ppbv	PQL ppbv	Q	Result ppbv	Spike ppbv	Rec. %	LCL - UCL % Q	Rec. %	RPD %	UCL % Q	MB	LCS	LCD	
1. Acetone	U	2.80		32.2	25.9	125	79 - 133	105	17	20	MB-1	LCS-1	LCD-1	
2. Benzene	U	0.520		26.6	24.8	107	64 - 119	101	6	20	MB-1	LCS-1	LCD-1	
3. Benzyl Chloride	U	0.250		25.9	22.1	117	65 - 143	114	3	20	MB-1	LCS-1	LCD-1	
4. Bromodichloromethane	U	0.260		30.3	24.4	125	75 - 122	*	112	11	20	MB-1	LCS-1	LCD-1
5. Bromoform	U	0.250		28.7	24.3	118	85 - 133	113	4	20	MB-1	LCS-1	LCD-1	
6. Bromomethane	U	0.500		26.9	23.9	113	84 - 138	105	7	20	MB-1	LCS-1	LCD-1	
7. 1,3-Butadiene	U	2.58		30.1	25.2	120	61 - 112	*	98	20	20	MB-1	LCS-1	LCD-1
8. 2-Butanone	U	2.65		28.5	26.4	108	71 - 119	95	13	20	MB-1	LCS-1	LCD-1	
9. Carbon Disulfide	U	2.63		29.1	25.5	114	59 - 108	*	104	9	20	MB-1	LCS-1	LCD-1
10. Carbon Tetrachloride	U	0.260		31.0	25.2	123	74 - 118	*	113	8	20	MB-1	LCS-1	LCD-1
11. Chlorobenzene	U	0.280		27.5	25.4	109	73 - 115	102	7	20	MB-1	LCS-1	LCD-1	
12. Chloroethane	U	2.48		27.7	24.0	116	74 - 126	102	13	20	MB-1	LCS-1	LCD-1	
13. Chloroform	U	0.530		31.2	25.5	122	71 - 118	*	112	9	20	MB-1	LCS-1	LCD-1
14. Chloromethane	U	2.53		25.6	24.6	104	62 - 108	91	13	20	MB-1	LCS-1	LCD-1	
15. Cyclohexane	U	2.60		28.3	25.3	112	69 - 119	108	6	20	MB-1	LCS-1	LCD-1	
16. Dibromochloromethane	U	0.280		35.2	27.0	131	77 - 130	*	126	4	20	MB-1	LCS-1	LCD-1
17. 1,2-Dichlorobenzene	U	0.260		28.6	24.3	117	67 - 134	111	5	20	MB-1	LCS-1	LCD-1	
18. 1,3-Dichlorobenzene	U	0.250		28.1	23.4	120	62 - 136	113	6	20	MB-1	LCS-1	LCD-1	
19. 1,4-Dichlorobenzene	U	0.260		27.8	24.3	114	64 - 129	109	4	20	MB-1	LCS-1	LCD-1	
20. Dichlorodifluoromethane	U	0.510		28.9	24.2	120	64 - 112	*	114	5	20	MB-1	LCS-1	LCD-1
21. 1,1-Dichloroethane	U	2.60		29.0	25.3	115	69 - 122	102	12	20	MB-1	LCS-1	LCD-1	
22. 1,2-Dichloroethane	U	0.260		31.0	24.8	125	71 - 117	*	117	7	20	MB-1	LCS-1	LCD-1
23. 1,1-Dichloroethene	U	0.260		29.0	25.6	113	64 - 129	105	7	20	MB-1	LCS-1	LCD-1	
24. cis-1,2-Dichloroethene	U	0.530		29.9	25.6	117	72 - 123	103	13	20	MB-1	LCS-1	LCD-1	
25. trans-1,2-Dichloroethene	U	2.60		29.9	25.1	119	71 - 126	111	7	20	MB-1	LCS-1	LCD-1	
26. 1,2-Dichloropropane	U	2.58		27.8	24.8	112	65 - 125	95	16	20	MB-1	LCS-1	LCD-1	
27. cis-1,3-Dichloropropene	U	0.550		31.0	26.0	119	77 - 136	114	4	20	MB-1	LCS-1	LCD-1	
28. trans-1,3-Dichloropropene	U	0.480		27.8	22.9	122	67 - 127	112	9	20	MB-1	LCS-1	LCD-1	
29. 1,4-Dioxane	U	2.55		28.4	24.6	116	68 - 131	102	13	20	MB-1	LCS-1	LCD-1	
30. Ethyl Acetate	U	2.65		30.4	25.6	119	66 - 127	109	9	20	MB-1	LCS-1	LCD-1	
31. Ethylbenzene	U	0.260		27.7	25.2	110	73 - 129	104	6	20	MB-1	LCS-1	LCD-1	
32. Ethylene Dibromide	U	0.240		29.7	22.8	130	71 - 132	119	9	20	MB-1	LCS-1	LCD-1	
33. 4-Ethyltoluene	U	0.260		30.2	24.5	123	78 - 123	117	5	20	MB-1	LCS-1	LCD-1	
34. n-Heptane	U	2.65		29.9	25.6	117	57 - 143	99	17	20	MB-1	LCS-1	LCD-1	
35. Hexachlorobutadiene	U	0.250		28.0	23.7	118	48 - 158	111	6	20	MB-1	LCS-1	LCD-1	
36. n-Hexane	U	0.530		30.4	25.9	117	63 - 131	101	15	20	MB-1	LCS-1	LCD-1	
37. 2-Hexanone	U	2.65		29.4	25.5	115	71 - 142	104	10	20	MB-1	LCS-1	LCD-1	
38. Isopropanol	U	2.80		27.4	26.7	103	59 - 129	94	9	20	MB-1	LCS-1	LCD-1	
39. Methylene Chloride	U	2.60		29.0	25.2	115	70 - 127	107	7	20	MB-1	LCS-1	LCD-1	
40. 2-Methylnaphthalene	U	2.43		21.9	22.7	96	70 - 130	89	8	20	MB-1	LCS-1	LCD-1	
41. 4-Methyl-2-pentanone	U	2.55		27.2	24.6	111	75 - 139	99	11	20	MB-1	LCS-1	LCD-1	
42. MTBE	U	0.530		30.1	25.7	117	73 - 135	107	9	20	MB-1	LCS-1	LCD-1	
43. Naphthalene	U	0.280		28.4	25.6	111	70 - 130	105	6	20	MB-1	LCS-1	LCD-1	
44. Propylene	U	2.58		27.2	24.7	110	59 - 112	101	9	20	MB-1	LCS-1	LCD-1	
45. Styrene	U	0.260		29.5	24.9	119	65 - 134	113	5	20	MB-1	LCS-1	LCD-1	
46. 1,1,2,2-Tetrachloroethane	U	0.530		26.0	25.0	104	79 - 132	98	6	20	MB-1	LCS-1	LCD-1	
47. Tetrachloroethene	U	0.260		30.3	24.5	124	70 - 129	114	8	20	MB-1	LCS-1	LCD-1	
48. Tetrahydrofuran	U	2.68		27.9	26.0	107	66 - 115	102	5	20	MB-1	LCS-1	LCD-1	
49. Toluene	U	0.260		29.9	25.1	119	62 - 128	109	9	20	MB-1	LCS-1	LCD-1	

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Quality Control Report
Preparation Batch QC Summary
Volatile Organics by GC/MS
Air

Batch ID: V413I04A
Page: 2 of 2
Date: 09/04/13

Preparation Batch: V413I04A Preparation Date: 09/04/13

Parameter	Method Blank (MB)			Laboratory Control Sample (LCS)						LCS Duplicate (LCD)			Run Code			
	Result ppbv	PQL ppbv	Q	Result ppbv	Spike ppbv	Rec. %	LCL - UCL % %	Q	Rec. %	RPD %	UCL %	Q	MB	LCS	LCD	
Parameter	Method Blank (MB)			Laboratory Control Sample (LCS)						LCS Duplicate (LCD)			Run Code			
Parameter	Result ppbv	PQL ppbv	Q	Result ppbv	Spike ppbv	Rec. %	LCL - UCL % %	Q	Rec. %	RPD %	UCL %	Q	MB	LCS	LCD	
50. 1,2,4-Trichlorobenzene	U	0.250		28.4	23.5	121	48 - 156	*	114	6	20		MB-1	LCS-1	LCD-1	
51. 1,1,1-Trichloroethane	U	0.260		30.5	24.8	123	73 - 118	*	113	8	20		MB-1	LCS-1	LCD-1	
52. 1,1,2-Trichloroethane	U	0.260		30.2	24.8	122	69 - 123		113	8	20		MB-1	LCS-1	LCD-1	
53. Trichloroethene	U	0.260		30.0	24.5	123	68 - 121	*	115	7	20		MB-1	LCS-1	LCD-1	
54. Trichlorofluoromethane	U	0.270		30.5	24.6	124	71 - 114	*	113	9	20		MB-1	LCS-1	LCD-1	
55. 1,1,2-Trichlorotrifluoroethane	U	0.260		29.3	25.2	118	71 - 117		107	8	20		MB-1	LCS-1	LCD-1	
56. 1,2,4-Trimethylbenzene	U	0.260		29.2	24.3	120	78 - 133		115	4	20		MB-1	LCS-1	LCD-1	
57. 1,3,5-Trimethylbenzene	U	0.260		28.4	24.6	115	67 - 126		110	4	20		MB-1	LCS-1	LCD-1	
58. Vinyl Acetate	U	2.68		33.9	26.2	130	80 - 142		119	9	20		MB-1	LCS-1	LCD-1	
59. Vinyl Chloride	U	0.510		28.6	24.4	117	64 - 128		107	9	20		MB-1	LCS-1	LCD-1	
60. m&p-Xylene	U	0.510		54.8	48.7	113	73 - 126		106	6	20		MB-1	LCS-1	LCD-1	
61. o-Xylene	U	0.260		28.7	25.3	113	76 - 127		107	5	20		MB-1	LCS-1	LCD-1	
System Monitoring Compounds (Surrogates):		Method Blank (MB)			Laboratory Control Sample (LCS)						LCS Duplicate (LCD)			Run Code		
1. 1,4-Difluorobenzene(S)	30.9	26.3	118		28.6	26.3	109	70 - 130		105	4	20		MB-1	LCS-1	LCD-1
2. 4-Bromofluorobenzene(S)	24.1	26.3	92		26.0	26.3	99	70 - 130		101	2	20		MB-1	LCS-1	LCD-1

Definitions/ Qualifiers:

U: The analyte was not detected at or above the PQL.

*: Value reported is outside QC limits

Run Code (Analysis Sequence/Run Time):

MB-1	V413I04A	09/04/13 14:05
LCS-1	V413I04A	09/04/13 10:56
LCD-1	V413I04A	09/04/13 11:42

Exception Summary:

Exceptions have been properly noted on reported results or affected samples have been scheduled for reanalysis when appropriate.

Report Generated By:

Daniel Robey
Chemist, Volatile Organics
Wednesday, September 04, 2013
3:49:30 PM

09-05-13

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Quality Control Report
Preparation Batch QC Summary
Volatile Organics by GC/MS

Batch ID: VA13H27A
Page: 1 of 2
Date: 08/28/13

Preparation Batch: VA13H27A Preparation Date: 08/27/13

Air

Parameter	Method Blank (MB)			Laboratory Control Sample (LCS)					LCS Duplicate (LCD)			Run Code			
	Result ppbv	PQL ppbv	Q	Result ppbv	Spike ppbv	Rec. %	LCL - UCL %	Q	Rec. %	RPD %	UCL %	Q	MB	LCS	LCD
Parameter	Method Blank (MB)			Laboratory Control Sample (LCS)					LCS Duplicate (LCD)			Run Code			
	Result ppbv	PQL ppbv	Q	Result ppbv	Spike ppbv	Rec. %	LCL - UCL %	Q	Rec. %	RPD %	UCL %	Q	MB	LCS	LCD
1. Acetone	6.63	5.60	*	25.8	25.9	100	79 - 133		99	1	20		MB-1	LCS-1	LCD-1
2. Benzene	U	0.260		24.7	24.8	100	64 - 119		97	3	20		MB-1	LCS-1	LCD-1
3. Benzyl Chloride	U	0.250		22.6	22.1	102	65 - 143		102	0	20		MB-1	LCS-1	LCD-1
4. Bromodichloromethane	U	0.260		26.0	24.4	107	75 - 122		107	0	20		MB-1	LCS-1	LCD-1
5. Bromoform	U	0.255		25.6	24.3	105	85 - 133		108	3	20		MB-1	LCS-1	LCD-1
6. Bromomethane	U	2.48		23.9	23.9	100	84 - 138		97	3	20		MB-1	LCS-1	LCD-1
7. 1,3-Butadiene	U	2.58		24.3	25.2	96	61 - 112		95	1	20		MB-1	LCS-1	LCD-1
8. 2-Butanone	U	0.270		26.0	26.4	98	71 - 119		98	0	20		MB-1	LCS-1	LCD-1
9. Carbon Disulfide	U	2.63		26.3	25.5	103	59 - 108		101	2	20		MB-1	LCS-1	LCD-1
10. Carbon Tetrachloride	U	0.260		26.3	25.2	105	74 - 118		104	1	20		MB-1	LCS-1	LCD-1
11. Chlorobenzene	U	0.265		25.4	25.4	100	73 - 115		100	0	20		MB-1	LCS-1	LCD-1
12. Chloroethane	U	2.48		24.0	24.0	100	74 - 126		99	1	20		MB-1	LCS-1	LCD-1
13. Chloroform	U	0.270		27.0	25.5	106	71 - 118		104	2	20		MB-1	LCS-1	LCD-1
14. Chloromethane	U	2.53		24.9	24.6	101	62 - 108		102	1	20		MB-1	LCS-1	LCD-1
15. Cyclohexane	U	2.60		24.0	25.3	95	69 - 119		94	1	20		MB-1	LCS-1	LCD-1
16. Dibromochloromethane	U	0.285		28.6	27.0	106	77 - 130		105	1	20		MB-1	LCS-1	LCD-1
17. 1,2-Dichlorobenzene	U	0.260		24.4	24.3	100	67 - 134		102	2	20		MB-1	LCS-1	LCD-1
18. 1,3-Dichlorobenzene	U	0.250		23.7	23.4	101	62 - 136		102	1	20		MB-1	LCS-1	LCD-1
19. 1,4-Dichlorobenzene	U	0.260		24.7	24.3	102	64 - 129		103	1	20		MB-1	LCS-1	LCD-1
20. Dichlorodifluoromethane	U	2.53		26.0	24.2	107	64 - 112		108	1	20		MB-1	LCS-1	LCD-1
21. 1,1-Dichloroethane	U	0.260		25.6	25.3	101	69 - 122		102	1	20		MB-1	LCS-1	LCD-1
22. 1,2-Dichloroethane	U	0.260		26.4	24.8	107	71 - 117		103	4	20		MB-1	LCS-1	LCD-1
23. 1,1-Dichloroethene	U	0.265		26.4	25.6	103	64 - 129		103	0	20		MB-1	LCS-1	LCD-1
24. cis-1,2-Dichloroethene	U	0.265		26.5	25.6	104	72 - 123		100	4	20		MB-1	LCS-1	LCD-1
25. trans-1,2-Dichloroethene	U	0.260		25.6	25.1	102	71 - 126		100	2	20		MB-1	LCS-1	LCD-1
26. 1,2-Dichloropropane	U	0.260		24.3	24.8	98	65 - 125		97	1	20		MB-1	LCS-1	LCD-1
27. cis-1,3-Dichloropropene	U	0.275		27.9	26.0	107	77 - 136		106	1	20		MB-1	LCS-1	LCD-1
28. trans-1,3-Dichloropropene	U	1.20		24.7	22.9	108	67 - 127		106	2	20		MB-1	LCS-1	LCD-1
29. 1,4-Dioxane	U	0.510		23.5	24.6	96	68 - 131		92	4	20		MB-1	LCS-1	LCD-1
30. Ethyl Acetate	U	2.65		25.0	25.6	98	66 - 127		100	2	20		MB-1	LCS-1	LCD-1
31. Ethylbenzene	U	0.260		25.9	25.2	103	73 - 129		103	0	20		MB-1	LCS-1	LCD-1
32. Ethylene Dibromide	U	0.240		24.1	22.8	106	71 - 132		103	3	20		MB-1	LCS-1	LCD-1
33. 4-Ethyltoluene	U	0.260		26.0	24.5	106	78 - 123		107	1	20		MB-1	LCS-1	LCD-1
34. n-Heptane	U	0.270		26.4	25.6	103	57 - 143		103	0	20		MB-1	LCS-1	LCD-1
35. Hexachlorobutadiene	U	0.255		23.2	23.7	98	48 - 158		99	1	20		MB-1	LCS-1	LCD-1
36. n-Hexane	U	0.270		26.6	25.9	103	63 - 131		102	1	20		MB-1	LCS-1	LCD-1
37. 2-Hexanone	U	1.33		27.8	25.5	109	71 - 142		107	2	20		MB-1	LCS-1	LCD-1
38. Isopropanol	U	14.0		23.9	26.7	90	59 - 129		86	5	20		MB-1	LCS-1	LCD-1
39. Methylene Chloride	U	2.60		26.0	25.2	103	70 - 127		100	3	20		MB-1	LCS-1	LCD-1
40. 2-Methylnaphthalene	U	2.43		17.1	22.7	75	70 - 130		78	4	20		MB-1	LCS-1	LCD-1
41. 4-Methyl-2-pentanone	U	0.260		26.6	24.6	108	75 - 139		105	3	20		MB-1	LCS-1	LCD-1
42. MTBE	U	0.260		26.8	25.7	104	73 - 135		103	1	20		MB-1	LCS-1	LCD-1
43. Naphthalene	U	0.280		22.5	25.6	88	70 - 130		90	2	20		MB-1	LCS-1	LCD-1
44. Propylene	U	2.58		25.6	24.7	104	59 - 112		101	3	20		MB-1	LCS-1	LCD-1
45. Styrene	U	0.260		25.9	24.9	104	85 - 134		105	1	20		MB-1	LCS-1	LCD-1
46. 1,1,2,2-Tetrachloroethane	U	0.265		26.4	25.0	105	79 - 132		105	0	20		MB-1	LCS-1	LCD-1
47. Tetrachloroethene	U	0.260		24.6	24.5	100	70 - 129		99	1	20		MB-1	LCS-1	LCD-1
48. Tetrahydrofuran	U	1.34		26.7	26.0	103	66 - 115		103	0	20		MB-1	LCS-1	LCD-1
49. Toluene	U	0.260		25.6	25.1	102	62 - 128		100	2	20		MB-1	LCS-1	LCD-1

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Quality Control Report
Preparation Batch QC Summary
Volatile Organics by GC/MS

Batch ID: VA13H27A
Page: 2 of 2
Date: 08/28/13

Air

Preparation Batch: VA13H27A Preparation Date: 08/27/13

Parameter	Method Blank (MB)			Laboratory Control Sample (LCS)					LCS Duplicate (LCD)			Run Code				
	Result ppbv	PQL ppbv	Q	Result ppbv	Spike ppbv	Rec. %	LCL - UCL % %	Q	Rec. %	RPD	UCL %	Q	MB	LCS	LCD	
	Method Blank (MB)			Laboratory Control Sample (LCS)					LCS Duplicate (LCD)			Run Code				
50. 1,2,4-Trichlorobenzene	U	0.250		21.7	23.5	92	48 - 156		95	3	20		MB-1	LCS-1	LCD-1	
51. 1,1,1-Trichloroethane	U	0.260		26.0	24.8	105	73 - 118		103	2	20		MB-1	LCS-1	LCD-1	
52. 1,1,2-Trichloroethane	U	0.265		26.4	24.8	106	69 - 123		105	1	20		MB-1	LCS-1	LCD-1	
53. Trichloroethene	U	0.260		25.4	24.5	104	68 - 121		103	1	20		MB-1	LCS-1	LCD-1	
54. Trichlorofluoromethane	U	0.270		27.1	24.6	110	71 - 114		107	3	20		MB-1	LCS-1	LCD-1	
55. 1,1,2-Trichlorotrifluoroethane	U	0.265		26.0	25.2	103	71 - 117		102	1	20		MB-1	LCS-1	LCD-1	
56. 1,2,4-Trimethylbenzene	U	0.260		25.7	24.3	106	78 - 133		106	0	20		MB-1	LCS-1	LCD-1	
57. 1,3,5-Trimethylbenzene	U	0.260		25.8	24.6	105	67 - 126		106	1	20		MB-1	LCS-1	LCD-1	
58. Vinyl Acetate	U	2.68		26.7	26.2	102	80 - 142		101	1	20		MB-1	LCS-1	LCD-1	
59. Vinyl Chloride	U	1.39		26.9	24.4	111	64 - 128		104	7	20		MB-1	LCS-1	LCD-1	
60. m&p-Xylene	U	0.510		50.7	48.7	104	73 - 126		105	1	20		MB-1	LCS-1	LCD-1	
61. o-Xylene	U	0.265		26.4	25.3	104	76 - 127		104	0	20		MB-1	LCS-1	LCD-1	
System Monitoring Compounds (Surrogates):	Method Blank (MB)			Laboratory Control Sample (LCS)					LCS Duplicate (LCD)			Run Code				
	Result ppbv	Spike ppbv	Rec. %	Q	Result ppbv	Spike ppbv	Rec.	LCL - UCL % %	Q	Rec. %	RPD	UCL %	Q	MB	LCS	LCD
	1. 1,4-Difluorobenzene(S)	26.1	26.3	100	26.9	26.3	102	70 - 130		101	1	20		MB-1	LCS-1	LCD-1
2. 4-Bromofluorobenzene(S)	25.4	26.3	97		26.9	26.3	103	70 - 130		102	1	20		MB-1	LCS-1	LCD-1

Definitions/ Qualifiers:

U: The analyte was not detected at or above the PQL.

*: Value reported is outside QC limits

Run Code (Analysis Sequence/Run Time):

MB-1	VA13H27A	08/27/13 04:37
LCS-1	VA13H27A	08/27/13 01:29
LCD-1	VA13H27A	08/27/13 02:29

Exception Summary:

Exceptions have been properly noted on reported results or affected samples have been scheduled for reanalysis when appropriate.

Report Generated By:

Robert Kuhajda
Chemist, Volatile Organics
Wednesday, August 28, 2013

11:11:57 AM



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Quality Control Report
Preparation Batch QC Summary
Volatile Organics by GC/MS

Batch ID: VA13H28A
Page: 1 of 2
Date: 08/29/13

Air

Preparation Batch: VA13H28A Preparation Date: 08/28/13

Parameter	Method Blank (MB)			Laboratory Control Sample (LCS)					LCS Duplicate (LCD)			Run Code			
	Result ppbv	PQL ppbv	Q	Result ppbv	Spike ppbv	Rec. %	LCL - UCL %	Q	Rec. %	RPD %	UCL %	Q	MB	LCS	LCD
Parameter	Method Blank (MB)			Laboratory Control Sample (LCS)					LCS Duplicate (LCD)			Run Code			
	Result ppbv	PQL ppbv	Q	Result ppbv	Spike ppbv	Rec. %	LCL - UCL %	Q	Rec. %	RPD %	UCL %	Q	MB	LCS	LCD
1. Acetone	U	5.60		27.1	25.9	105	79 - 133		105	0	20		MB-1	LCS-1	LCD-1
2. Benzene	U	0.260		25.4	24.8	102	64 - 119		104	2	20		MB-1	LCS-1	LCD-1
3. Benzyl Chloride	U	0.250		22.7	22.1	103	65 - 143		106	3	20		MB-1	LCS-1	LCD-1
4. Bromodichloromethane	U	0.260		26.7	24.4	110	75 - 122		113	3	20		MB-1	LCS-1	LCD-1
5. Bromoform	U	0.255		26.1	24.3	108	85 - 133		110	2	20		MB-1	LCS-1	LCD-1
6. Bromomethane	U	2.48		22.9	23.9	96	84 - 138		101	5	20		MB-1	LCS-1	LCD-1
7. 1,3-Butadiene	U	2.58		24.0	25.2	95	61 - 112		97	2	20		MB-1	LCS-1	LCD-1
8. 2-Butanone	0.355	0.270	*	26.1	26.4	99	71 - 119		103	4	20		MB-1	LCS-1	LCD-1
9. Carbon Disulfide	U	2.63		27.2	25.5	107	59 - 108		108	1	20		MB-1	LCS-1	LCD-1
10. Carbon Tetrachloride	U	0.260		27.2	25.2	108	74 - 118		110	2	20		MB-1	LCS-1	LCD-1
11. Chlorobenzene	U	0.265		25.9	25.4	102	73 - 115		105	3	20		MB-1	LCS-1	LCD-1
12. Chloroethane	U	2.48		23.2	24.0	97	74 - 126		103	6	20		MB-1	LCS-1	LCD-1
13. Chloroform	U	0.270		27.7	25.5	108	71 - 118		111	3	20		MB-1	LCS-1	LCD-1
14. Chloromethane	U	2.53		24.5	24.6	100	62 - 108		104	4	20		MB-1	LCS-1	LCD-1
15. Cyclohexane	U	2.60		24.9	25.3	98	69 - 119		100	2	20		MB-1	LCS-1	LCD-1
16. Dibromochloromethane	U	0.285		29.4	27.0	109	77 - 130		112	3	20		MB-1	LCS-1	LCD-1
17. 1,2-Dichlorobenzene	U	0.260		24.8	24.3	102	67 - 134		105	3	20		MB-1	LCS-1	LCD-1
18. 1,3-Dichlorobenzene	U	0.250		24.4	23.4	104	62 - 136		107	3	20		MB-1	LCS-1	LCD-1
19. 1,4-Dichlorobenzene	U	0.260		25.2	24.3	103	64 - 129		107	4	20		MB-1	LCS-1	LCD-1
20. Dichlorodifluoromethane	U	2.53		27.2	24.2	113	64 - 112	*	113	0	20		MB-1	LCS-1	LCD-1
21. 1,1-Dichloroethane	U	0.260		26.8	25.3	106	69 - 122		109	3	20		MB-1	LCS-1	LCD-1
22. 1,2-Dichloroethane	U	0.260		27.4	24.8	111	71 - 117		114	3	20		MB-1	LCS-1	LCD-1
23. 1,1-Dichloroethene	U	0.265		26.8	25.6	105	64 - 129		109	4	20		MB-1	LCS-1	LCD-1
24. cis-1,2-Dichloroethene	U	0.265		26.8	25.6	105	72 - 123		109	4	20		MB-1	LCS-1	LCD-1
25. trans-1,2-Dichloroethene	U	0.260		26.5	25.1	106	71 - 126		109	3	20		MB-1	LCS-1	LCD-1
26. 1,2-Dichloropropane	U	0.260		25.2	24.8	102	65 - 125		103	1	20		MB-1	LCS-1	LCD-1
27. cis-1,3-Dichloropropene	U	0.275		28.9	26.0	111	77 - 136		113	2	20		MB-1	LCS-1	LCD-1
28. trans-1,3-Dichloropropene	U	1.20		25.5	22.9	112	67 - 127		115	3	20		MB-1	LCS-1	LCD-1
29. 1,4-Dioxane	U	0.510		22.9	24.6	93	68 - 131		96	3	20		MB-1	LCS-1	LCD-1
30. Ethyl Acetate	U	2.65		27.0	25.6	105	66 - 127		104	1	20		MB-1	LCS-1	LCD-1
31. Ethylbenzene	U	0.260		26.6	25.2	106	73 - 129		109	3	20		MB-1	LCS-1	LCD-1
32. Ethylene Dibromide	U	0.240		24.7	22.8	108	71 - 132		110	2	20		MB-1	LCS-1	LCD-1
33. 4-Ethyltoluene	U	0.260		26.5	24.5	108	78 - 123		111	3	20		MB-1	LCS-1	LCD-1
34. n-Heptane	U	0.270		27.3	25.6	107	57 - 143		108	1	20		MB-1	LCS-1	LCD-1
35. Hexachlorobutadiene	U	0.255		23.7	23.7	100	48 - 158		103	3	20		MB-1	LCS-1	LCD-1
36. n-Hexane	U	0.270		27.2	25.9	105	63 - 131		107	2	20		MB-1	LCS-1	LCD-1
37. 2-Hexanone	U	1.33		28.3	25.5	111	71 - 142		115	4	20		MB-1	LCS-1	LCD-1
38. Isopropanol	U	14.0		23.7	26.7	89	59 - 129		90	1	20		MB-1	LCS-1	LCD-1
39. Methylene Chloride	3.01	2.60	*	26.7	25.2	106	70 - 127		114	7	20		MB-1	LCS-1	LCD-1
40. 2-Methylnaphthalene	U	2.43		17.1	22.7	75	70 - 130		79	5	20		MB-1	LCS-1	LCD-1
41. 4-Methyl-2-pentanone	U	0.260		27.3	24.6	111	75 - 139		115	4	20		MB-1	LCS-1	LCD-1
42. MTBE	U	0.260		27.5	25.7	107	73 - 135		111	4	20		MB-1	LCS-1	LCD-1
43. Naphthalene	U	0.280		23.0	25.6	90	70 - 130		93	3	20		MB-1	LCS-1	LCD-1
44. Propylene	U	2.58		25.2	24.7	102	59 - 112		104	2	20		MB-1	LCS-1	LCD-1
45. Styrene	U	0.260		26.4	24.9	106	85 - 134		109	3	20		MB-1	LCS-1	LCD-1
46. 1,1,2,2-Tetrachloroethane	U	0.265		26.1	25.0	104	79 - 132		109	5	20		MB-1	LCS-1	LCD-1
47. Tetrachloroethene	U	0.260		25.8	24.5	105	70 - 129		107	2	20		MB-1	LCS-1	LCD-1
48. Tetrahydrofuran	U	1.34		27.2	26.0	105	66 - 115		109	4	20		MB-1	LCS-1	LCD-1
49. Toluene	U	0.260		26.3	25.1	105	62 - 128		108	3	20		MB-1	LCS-1	LCD-1

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Quality Control Report
Preparation Batch QC Summary
Volatile Organics by GC/MS
Air

Batch ID: VA13H28A
Page: 2 of 2
Date: 08/29/13

Preparation Batch: VA13H28A Preparation Date: 08/28/13

Parameter	Method Blank (MB)			Laboratory Control Sample (LCS)				LCS Duplicate (LCD)				Run Code			
	Result ppbv	PQL ppbv	Q	Result ppbv	Spike ppbv	Rec. %	LCL - UCL % %	Rec. %	RPD %	UCL %	Q	MB	LCS	LCD	
Parameter	Method Blank (MB)			Laboratory Control Sample (LCS)				LCS Duplicate (LCD)				Run Code			
	Result ppbv	PQL ppbv	Q	Result ppbv	Spike ppbv	Rec. %	LCL - UCL % %	Rec. %	RPD %	UCL %	Q	MB	LCS	LCD	
50. 1,2,4-Trichlorobenzene	U	0.250		22.7	23.5	96	48 - 156	99	3	20		MB-1	LCS-1	LCD-1	
51. 1,1,1-Trichloroethane	U	0.260		26.7	24.8	108	73 - 118	111	3	20		MB-1	LCS-1	LCD-1	
52. 1,1,2-Trichloroethane	U	0.265		27.1	24.8	109	69 - 123	112	3	20		MB-1	LCS-1	LCD-1	
53. Trichloroethene	U	0.260		26.2	24.5	107	68 - 121	110	3	20		MB-1	LCS-1	LCD-1	
54. Trichlorofluoromethane	U	0.270		27.8	24.6	113	71 - 114	114	1	20		MB-1	LCS-1	LCD-1	
55. 1,1,2-Trichlorotrifluoroethane	U	0.265		26.5	25.2	105	71 - 117	108	3	20		MB-1	LCS-1	LCD-1	
56. 1,2,4-Trimethylbenzene	U	0.260		25.8	24.3	106	78 - 133	110	4	20		MB-1	LCS-1	LCD-1	
57. 1,3,5-Trimethylbenzene	U	0.260		26.1	24.6	106	67 - 126	109	3	20		MB-1	LCS-1	LCD-1	
58. Vinyl Acetate	U	2.68		27.4	26.2	105	80 - 142	108	3	20		MB-1	LCS-1	LCD-1	
59. Vinyl Chloride	U	1.39		26.4	24.4	108	64 - 128	110	2	20		MB-1	LCS-1	LCD-1	
60. m&p-Xylene	U	0.510		51.2	48.7	105	73 - 126	109	4	20		MB-1	LCS-1	LCD-1	
61. o-Xylene	U	0.265		26.5	25.3	105	76 - 127	107	2	20		MB-1	LCS-1	LCD-1	
System Monitoring Compounds (Surrogates):	Method Blank (MB)			Laboratory Control Sample (LCS)				LCS Duplicate (LCD)				Run Code			
	Result ppbv	Spike ppbv	Rec. %	Q	Result ppbv	Spike ppbv	Rec. %	LCL - UCL % %	Rec. %	RPD %	UCL %	MB	LCS	LCD	
1. 1,4-Difluorobenzene(S)	26.7	26.3	102		27.4	26.3	104	70 - 130	104	0	20		MB-1	LCS-1	LCD-1
2. 4-Bromofluorobenzene(S)	25.3	26.3	96		26.7	26.3	102	70 - 130	100	2	20		MB-1	LCS-1	LCD-1

Definitions/ Qualifiers:

U: The analyte was not detected at or above the PQL.
*: Value reported is outside QC limits

Run Code (Analysis Sequence/Run Time):

MB-1	VA13H28A	08/28/13 15:07
LCS-1	VA13H28A	08/28/13 11:18
LCD-1	VA13H28A	08/28/13 12:16

Exception Summary:

Exceptions have been properly noted on reported results or affected samples have been scheduled for reanalysis when appropriate.

Report Generated By:

Robert Kuhajda
Chemist, Volatile Organics
Thursday, August 29, 2013
10:31:47 AM



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Case Narrative

Client: Envirologic Technologies, Inc.
Project Identification: JCBRAU/100218C

Sixteen air samples were collected on August 23, 2013 and received by Fibertec, Inc. on August 23, 2013 at room temperature. The samples were prepared and analyzed within the required holding times. Exceptions are noted below.

Cross reference

Client ID#	Lab ID#	Matrix	Requested Tests
SG-1	57601-001	AIR	VOC
SG-4	57601-002	AIR	VOC
SG-7	57601-003	AIR	VOC
SG-13	57601-004	AIR	VOC
SG-15	57601-005	AIR	VOC
SG-14	57601-006	AIR	VOC
SG-12	57601-007	AIR	VOC
SG-11	57601-008	AIR	VOC
SG-10	57601-009	AIR	VOC
SG-9	57601-010	AIR	VOC
SG-8	57601-011	AIR	VOC
SG-6	57601-012	AIR	VOC
SG-5	57601-013	AIR	VOC
SG-3	57601-014	AIR	VOC
SG-2	57601-015	AIR	VOC
M-1A	57601-016	AIR	VOC

Exceptions

Volatile Organic Compounds (VOC) by TO-15

Sample 57601-008 was received with water in the bottle VAC.

Sample 57601-011 was qualified as estimated for acetone because the concentration was above the linear calibration range of instrument.

No other exceptions were observed.

APPENDIX E

DATA VALIDATION REPORT



**DATA VALIDATION REPORT
(QUALITY ASSURANCE ASSESSMENT)
FOR
INITIAL ASSESSMENT OF THE VAPOR INTRUSION PATHWAY
AT THE
FORMER ACME INDUSTRIES PROPERTY
600 – 620 NORTH MECHANIC STREET
JACKSON, MICHIGAN**

Envirologic Technologies, Inc. (Envirologic) completed an initial assessment of the vapor intrusion pathway of a currently vacant property referred to as the Former Acme Industries Property, located at 600 – 620 North Mechanic St., Jackson, Michigan (subject property). The assessment was completed with support from the Brownfield Cleanup Revolving Loan Fund (BCRLF). The report was conducted in accordance with the approved USEPA Sampling Plan for the subject property.

The purpose of this Data Validation Report is to validate and verify the analytical data as well as draw conclusions on the data in relation to the Data Quality Objectives described in the Sampling Plan.

Sample Design Review

The U.S. EPA BCRLF Grant included allocated funds for the purpose of “monitoring populations exposed to hazardous substances and contaminants from a Brownfield Site.” Contamination from the historically industrial use of the Acme/Zoerman Clark property may present unacceptable risks to human receptors. Future redevelopment of the subject property will likely involve some form of cleanup (e.g., placement of engineered barriers), and the final results of redevelopment will need to protect the public from exposure to contaminants present at the site.

Previous investigations of soil and groundwater had identified contaminants at the site including volatile organic compounds (VOCs). Initial data indicated the possibility of sufficient soil contaminants to adversely impact ambient air quality. More intensive evaluation of site conditions demonstrated that the ambient air inhalation exposure pathway was not an unacceptable risk and that the site could be developed for commercial purposes. However, contaminant levels identified in the previous investigations did exceed screening levels designed to be protective of the vapor intrusion pathway. The vapor intrusion pathway was evaluated in order to ascertain whether this pathway presents an unacceptable risk to the

public. Information obtained from this investigation will be used to help inform appropriate cleanup actions and engineering controls needed to mitigate risk to public both during and after the redevelopment.

Fifteen shallow soil borings were advanced in a grid pattern across the site, inclusive of known areas of concern and possible future building sites. Borings were installed to a target depth of five feet beneath the bottom of the concrete slab, although, at several locations refusal was met before five feet. Vapor monitoring points were installed and sampled in accordance with the Standard Operating Procedures (SOP) presented in Appendix F.2 of the *MDEQ Guidance Document for the Vapor Intrusion Pathway*.

Data Quality Objective (DQO)

The Vapor Intrusion Assessment was designed to determine the following:

- Do the concentrations of carbon tetrachloride and other VOCs in soil gas pose an indoor air inhalation risk?

The DQOs are evaluated below with respect to the RECs and the actual data collected.

Data Review (Data Verification and Validation)

The data collected in the investigation was reviewed by the Data Manager, with supporting review provided by David Stegink – Associate Vice President & Senior Environmental Scientist. The purpose of the review was to confirm (verify) that the data was collected in accordance with the SOPs and the Quality Assurance Project Plan (QAPP). The quality of the data was simultaneously assessed to determine that it was scientifically valid. The purpose of the Data Verification and Validation was to determine the usefulness of the data in making decisions posed by the DQOs and for making decisions on future property use with respect to environmental concerns. All of the collected data was determined to be verified and valid using the PARCC criteria (precision, accuracy, representativeness, completeness, and comparability) as explained in the following table:

Criteria	Field Data	Laboratory Data
Precision	Field methods and equipment calibration SOPs were followed in order to provide data within the precision limits of the field equipment.	Results between the masked duplicate (M-1A) are comparable to sample results (SG-4). Methods for collecting matrix spike and matrix spike duplicate samples have not been developed for soil gas sampling.
Accuracy	Due to the nature of the bottle VACs and soil gas sampling apparatus, methods for collecting field blanks and equipment blanks for soil gas sampling have not been developed. Thus, no analytical data is available to assess impact of field sampling activities on the accuracy of analytical results.	Soil gas sample SG-11 was submitted to the laboratory with some water in the bottle VAC – however, this did not affect accuracy of analytical results. Soil gas sample SG-8 was qualified as an estimate for acetone because concentration was above the instrument calibration range. However, acetone was not above its respective SG _{VI} screening level, and does not affect conclusions drawn from these data.
Representativeness	The laboratory results were representative of field observations; that is, contaminants were detected in samples where expected.	The samples for analysis were extracted from the original samples following standard methods, and thus are representative.
Completeness	All proposed borings were installed at locations reasonably similar to those proposed in the original Sampling and Analysis Plan	All of the analyses provided by the laboratory were determined to be complete.
Comparability	Field methods set forth in the SOP were followed during field work; therefore sample results are comparable to one another.	The samples were analyzed following standard methods and thus are comparable to cleanup criteria and other samples from the project site.

Field Procedures

The Sampling Plan was prepared by David Warwick – Vice President and Hydrogeologist and reviewed by David Stegink. Field notes and chain of custody procedures (including hold times) and instrument calibration were reviewed for this data assessment.

Quality Assurance/Quality Control Samples

The QA/QC samples collected for this project are presented in the following table:

Sample ID	Matrix	Type
Masked Duplicate	Soil gas	Masked Duplicate for SG-4. Submitted for VOC analysis by USEPA TO-15 methods.

It should be noted that, due to the nature of the Bottle VACs and sampling apparatus used to collect soil gas samples, field methods have not been developed for the collection of Trip/Field Blanks or Equipment Blanks. Also, laboratory methods have not been developed for the creation of Matrix Spike and Matrix Spike Duplicate samples.

Masked Duplicate Sample

The purpose of the masked duplicate (M-1A) sample was to evaluate the ability of the laboratory to replicate data. The masked duplicate for soil was collected at soil boring SG-4. Results for M-1A and SG-4 were compared with one another; target compounds were detected in similar magnitudes. With the exception of a low detection (70 parts per billion by volume; ppbv) of isopropanol in M-1A, all non-detect results in the original and duplicate samples.

Laboratory Data

Fibertec provided a Quality Control Report of the preparation batch of volatile organics by gas chromatography/mass spectroscopy (GC/MS). Since no matrix spike or matrix spike duplicate samples were submitted, Envirologic reviewed the method blank and laboratory control sample results provided by Fibertec, used to monitor system calibration. The laboratory control samples submitted for the preparation batch on September 4, 2013 identified several VOC target compounds at concentrations outside of their control limits. However, when soil gas samples results corresponding to the September 4, 2013 preparation batch were reviewed, none of the target compounds identified outside of their control limits were detected in soil gas

samples at concentrations above their respective SG_{VI} screening values. Therefore, uncertainty surrounding laboratory quality controls do not affect conclusions drawn from these data.

The Fibertec laboratory Quality Control Report also reported that sample SG-8 was qualified as estimated for acetone because the concentration was above the linear calibration range of the instrument. However, acetone results for SG-8 are several orders of magnitude below the respective SGVI screening value. Therefore, the qualification of this result as an estimate does not affect conclusions drawn from these data.

Data Reduction and Processing

Limited data reduction and processing was conducted. The field notes were composed by Envirologic Field Geologist Robert Webster. The analytical laboratory data sheets were reviewed and reduced into a table for the vapor intrusion assessment by an Envirologic Project Geologist - Scientist Dean Hazle. The Initial Assessment of the Vapor Intrusion Pathway was reviewed by David Stegink and David Warwick.

Statistical Test

Statistical methods were used to evaluate the laboratory data. The first statistical analysis was the comparison of the actual reporting limit to the laboratory standard reporting limit. The second statistical analysis was the direct comparison of the detected analytes to the cleanup criteria. Conclusions can be drawn from a direct comparison of contaminant cleanup concentrations and thus further statistics were not employed to develop background concentrations.

Conclusions

All of the data collected have been verified and are valid to make decisions about the DQO. The data present conditions that would logically be expected based upon the identified site use history and previous analytical results.